GEL Laboratories LLC
a member of The GEL Group INC

PO Box 30712 Charleston, SC 29417
2040 Savage Road Charleston, SC 29407
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gel.com

February 21, 2018

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

Re: CHPRC SAF S18-001
Work Order: 442240
SDG: GEL442240

Dear Mr. Fitzgerald:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on January 24, 2018 and January 25, 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

Heather Shaffer
Project Manager

Purchase Order: 300071 - 7H
Chain of Custody: S18-001-084, S18-001-087, S18-001-093, S18-001-094, S18-001-095, S18-001-121, S18-001-122, S18-001-126, S18-001-127, S18-001-315, S18-001-384, S18-001-385, S18-001-386, S18-001-387, S18-001-390, S18-001-399 and S18-001-400
Enclosures

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Case Narrative

General Narrative
for
CH2MHill Plateau Remediation Company
CHPRC SAF S18-001
SDG: GEL442240

February 21, 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 January 24, 2018 and January 25, 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:

Laboratory Identification	Sample Description
442240001	B3FWJ4
442240002	B3FW90
442240003	B3FVV0
442240004	B3FVV1
442240005	B3FX35
442240006	B3FX37
442240007	B3FX39
442240008	B3FX43
442240009	B3FX44
442240010	B3FX40
442240011	B3FW03
442240012	B3FW04
442240013	B3FW81
442240014	B3FW85
442240015	B3FW82
442240016	B3FW86
442240017	B3FVV3
442240018	B3FVV4
442240019	B3HD01
442240020	B3HD02
442240021	B3HD03
442240022	B3HD06

442240023	B3HD09
442240024	B3HD25
442240025	B3HD26

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, Metals and Radiochemistry.

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

Heather Shaffer
Project Manager

Technical Case Narrative
CH2MHill Plateau Remediation Company (CPRC)
SDG #: GEL442240
Work Order #: 442240

Metals

Determination of Metals by ICP

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

CRDL/PQL Requirements
The PQL standard recoveries for SW846 6010C or 6010D met the control limits with the exception of potassium. Client sample concentrations were less than the MDL or greater than two times the PQL; therefore the data were not adversely affected. 442240001 (B3FWJ4), 442240002 (B3FW90), 442240003 (B3FVV0), 442240004 (B3FVV1), 442240005 (B3FX35), 442240006 (B3FX37), 442240007 (B3FX39), 442240008 (B3FX43), 442240009 (B3FX44), 442240010 (B3FX40), 442240013 (B3FW81), 442240014 (B3FW85), 442240015 (B3FW82) and 442240016 (B3FW86).

Determination of Metals by ICP-MS

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.

General Chemistry

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.

Radiochemistry

I129LL_SEP_LEPS_GS: COMMON (low level)

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.

GAMMA_GS:COMMON

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

Recounts
Sample 1203959128 (LCS) was recounted due to low recovery. The recount is reported.

SRISO_SEP_PRECIP_GPC: COMMON

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

Recounts
Samples 1203961246 (B3HD07DUP) and 442240019 (B3HD01) were recounted due to results more negative than the three sigma TPU. The second counts are reported. Sample 442240022 (B3HD06) was taken through additional clean-up steps and recounted due to a suspected false positive. The recount is reported.

9310_ALPHABETA_GPC: COMMON

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

Gross Alpha/Beta Preparation Information
High hygroscopic salt content in evaporated samples can cause the sample mass to fluctuate due to moisture absorption. To minimize this interference, the salts are converted to oxides by heating the sample under a flame until a dull red color is obtained. The conversion to oxides stabilizes the sample weight and ensures that proper alpha/beta efficiencies are assigned for each sample. Volatile radioisotopes of carbon, hydrogen, technetium, polonium and cesium may be lost during sample heating.

Recounts
Sample 1203961282 (LCS) was recounted due to high recovery. The recount is reported.

Miscellaneous Information

Additional Comments

The matrix spike and matrix spike duplicate, 1203961280 (B3HD09MS) and 1203961281 (B3HD09MSD), aliquots were reduced to conserve sample volume.

TRITIUM_DIST_LSC: COMMON

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
The matrix spike, 1203958795 (B3FWR5MS), aliquot was reduced to conserve sample volume.

TC99_EIE_LSC: COMMON

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

Recounts
Samples 1203963257 (Non SDG 442156001DUP) and 442240022 (B3HD06) were recounted to verify sample results. Recounts are reported.

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

442240

C.O.C. # S18-001-084

Page 1 of 1

Collector: Juan Aguilar /CHPRC	**Contact/Requester:** Karen Waters-Husted	**Telephone No.:** 509-376-4650
SAF No.: S18-001	**Sampling Origin:** Hanford Site	**Purchase Order/Charge Code:** 300071
Project Title: SURV, JANUARY 2018	**Logbook No.:** HNF-N-506-97145	**Ice Chest No.:** GUS-673
Shipped To (Lab): GEL Laboratories, LLC	**Method of Shipment** Commercial Carrier	**Bill of Lading/Air Bill No.:** 771302704876
Protocol SURV	**Priority:** 30 Days	**Offsite Property No.:** 8989

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
B3FWJ4	Y	W	1-22-18	1200	1x500-mL G/P	6010_METALS_ICP: GW 04; 6020_METALS_ICPMS: GW 01	6 Months	HNO3 to pH <2
B3FW90	N	W	1-22-18	1200	1x500-mL G/P	6010_METALS_ICP: GW 04; 6020_METALS_ICPMS: GW 01	6 Months	HNO3 to pH <2

Relinquished By	Print First and Last Name	Signature	Date/Time	Received By	Print First and Last Name	Signature	Date/Time
Juan Aguilar /CHPRC		JAN 22 2018	1300	SSU-1		JAN 22 2018	1300
SSU-1		JAN 23 2018	0845	Jeff Lucas /CHPRC		JAN 23 2018	0845
Jeff Lucas /CHPRC		JAN 23 2018	1400	FEDEX			
MEIT 1/25/18	FedEx		FX	SBOONE		1/24/18	900

Matrix *

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

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

Disposed By:

Date/Time:

Printed On 1/3/2018

FSR ID = FSR55818

A-6004-842 (REV 3)

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST 442240	C.O.C. # S18-001-087 Page 1 of 1

Collector: Chris Fulton CHPRC	**Contact/Requester:** Karen Waters-Husted	**Telephone No.:** 509-376-4650
SAF No.: S18-001	**Sampling Origin:** Hanford Site	**Purchase Order/Charge Code:** 300071
Project Title: SURV, JANUARY 2018	**Logbook No.:** HNF-N-506-94	**Ice Chest No.:** GWS-684
Shipped To (Lab): GEL Laboratories, LLC	**Method of Shipment** Commercial Carrier	**Bill of Lading/Air Bill No.:** 771302001499
Protocol SURV	**Priority:** 30 Days	**Offsite Property No.:** 8988

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
B3FVV0	N	W	1/22/18	1118	1x500-mL G/P	6010_METALS_ICP: GW 04; 6020_METALS_ICPMS: GW 01	6 Months	HNO3 to pH <2
B3FVV1	Y	W	1	1	1x500-mL G/P	6010_METALS_ICP: GW 04; 6020_METALS_ICPMS: GW 01	6 Months	HNO3 to pH <2

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Relinquished By	Print First and Last Name	Signature	Date/Time
Chris Fulton CHPRC			JAN 2 2 2018 1433
SSU-1			JAN 2 3 2018 0845
Jeff Lucas /CHPRC			JAN 2 3 2018 1400
		FedEx	

Received By	Print First and Last Name	Signature	Date/Time
SSU-1			JAN 2 2 2018 1433
Jeff Lucas /CHPRC			JAN 2 3 2018 0845
FEDEX			
		SBOONE	1-24-18 900

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:

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST 442240	C.O.C. # S18-001-093 Page 1 of 1

Collector: Larry Rosane /CHPRC	**Contact/Requester:** Karen Waters-Husted	**Telephone No.:** 509-376-4650
SAF No.: S18-001	**Sampling Origin:** Hanford Site	**Purchase Order/Charge Code:** 300071
Project Title: SURV, JANUARY 2018	**Logbook No.:** HNF-N-506 -96184	**Ice Chest No.:** GWS-739
Shipped To (Lab): GEL Laboratories, LLC	**Method of Shipment** Commercial Carrier	**Bill of Lading/Air Bill No.:** 7713 2207 2810
Protocol SURV	**Priority:** 30 Days	**Offsite Property No.:** 8994

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
B3FX35	N	W	JAN 23 2018	0945	1x500-mL G/P	6010_METALS_ICP: GW 04; 6020_METALS_ICPMS: GW 01	6 Months	HNO3 to pH <2
B3FX37	Y	W	↓	↓	1x500-mL G/P	6010_METALS_ICP: GW 04; 6020_METALS_ICPMS: GW 01	6 Months	HNO3 to pH <2
B3FX35	N	W	JAN 23 2018	0945	1x250-mL G/P	2320_ALKALINITY: COMMON	14 Days	Cool <=6C

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Relinquished By / Print First and Last Name	Signature	Date/Time	Received By / Print First and Last Name	Signature	Date/Time
Larry Rosane /CHPRC	Larry Rosane	JAN 23 2018 1235	Lesly Wall /CHPRC	Lesly Wall	JAN 23 2018 1235
Lesly Wall /CHPRC	Lesly Wall	JAN 23 2018 1400	FEDEX		
MEH 1/25/18	FedEx	FX	[illegible] BOONE		1-24-18 900

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:

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST 442240	C.O.C. # S18-001-094 Page 1 of 1

Collector: Larry Rosane /CHPRC	**Contact/Requester:** Karen Waters-Husted	**Telephone No.:** 509-376-4650
SAF No.: S18-001	**Sampling Origin:** Hanford Site	**Purchase Order/Charge Code:** 300071
Project Title: SURV, JANUARY 2018	**Logbook No.:** HNF-N-506 - 96184	**Ice Chest No.:** GLOS-739
Shipped To (Lab): GEL Laboratories, LLC	**Method of Shipment** Commercial Carrier	**Bill of Lading/Air Bill No.:** 771306007 2810
Protocol SURV	**Priority:** 30 Days	**Offsite Property No.:** 8994

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
B3FX39	N	W	JAN 23 2018	0700	1x500-mL G/P	6010_METALS_ICP: GW 04; 6020_METALS_ICPMS: GW 01	6 Months	HNO3 to pH <2
B3FX43	Y	W	↓	↓	1x500-mL G/P	6010_METALS_ICP: GW 04; 6020_METALS_ICPMS: GW 01	6 Months	HNO3 to pH <2

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Relinquished By	Print First and Last Name	Signature	Date/Time
Larry Rosane /CHPRC	Larry Rosane		JAN 23 2018 1235
Lesly Wall /CHPRC	Lesly Wall		JAN 23 2018 1400
	DEH	FedEx	1/25/18 FedEx

Received By	Print First and Last Name	Signature	Date/Time
Lesly Wall /CHPRC	Lesly Wall		JAN 23 2018 1235
	FEDEX		
	S BOONE		1/24/18 900

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:

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST 442240	C.O.C. # S18-001-095 Page 1 of 1

Collector: Larry Rosane /CHPRC	**Contact/Requester:** Karen Waters-Husted	**Telephone No.:** 509-376-4650
SAF No.: S18-001	**Sampling Origin:** Hanford Site	**Purchase Order/Charge Code:** 300071
Project Title: SURV, JANUARY 2018	**Logbook No.:** HNF-N-506 - 96/86	**Ice Chest No.:** GDS-739
Shipped To (Lab): GEL Laboratories, LLC	**Method of Shipment** Commercial Carrier	**Bill of Lading/Air Bill No.:** 771306072810
Protocol SURV	**Priority:** 30 Days	**Offsite Property No.:** 8994

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
B3FX44	Y	W	JAN 23 2018	1135	1x500-mL G/P	6010_METALS_ICP: GW 04; 6020_METALS_ICPMS: GW 01	6 Months	HNO3 to pH <2
B3FX40	N	W	"	"	1x500-mL G/P	6010_METALS_ICP: GW 04; 6020_METALS_ICPMS: GW 01	6 Months	HNO3 to pH <2

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	Relinquished By: Larry Rosane /CHPRC — Larry Rosane — JAN 23 2018 1235	Received By: Lesly Wall /CHPRC — Lesly Wall — JAN 23 2018 1235
	Print First and Last Name / Signature / Date/Time	Print First and Last Name / Signature / Date/Time
	Relinquished By: Lesly Wall /CHPRC — Lesly Wall — JAN 23 2018 1400	Received By: FEDEX
	Print First and Last Name / Signature / Date/Time	Print First and Last Name / Signature / Date/Time
	Relinquished By: MEH 1/25/18 — FedEx — ~~FE~~	Received By: [illegible] SBOONE 1/24/18 900
	Print First and Last Name / Signature / Date/Time	Print First and Last Name / Signature / Date/Time
	Relinquished By:	Received By:
	Print First and Last Name / Signature / Date/Time	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:

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST 442240	C.O.C. # S18-001-121 Page 1 of 1

Collector: Juan Aguilar /CHPRC	**Contact/Requester:** Karen Waters-Husted	**Telephone No.:** 509-376-4650
SAF No.: S18-001	**Sampling Origin:** Hanford Site	**Purchase Order/Charge Code:** 300071
Project Title: SURV, JANUARY 2018	**Logbook No.:** HNF-N-506 -97146	**Ice Chest No.:** 6WS-679
Shipped To (Lab): GEL Laboratories, LLC	**Method of Shipment** Commercial Carrier	**Bill of Lading/Air Bill No.:** 771303203276
Protocol SURV	**Priority:** 30 Days	**Offsite Property No.:** 8890

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
B3FW03	N	W	1-23-18	0715	1x1-L P	9310_ALPHABETA_GPC: COMMON	6 Months	HNO3 to pH <2
B3FW03	N	W	↓	↓	1x4-L G/P	GAMMA_GS: COMMON	6 Months	HNO3 to pH <2
B3FW03	N	W			1x4-L G/P	I129LL_SEP_LEPS_GS_LL: COMMON	6 Months	None
B3FW03	N	W			1x1-L G/P	SRISO_SEP_PRECIP_GPC: COMMON	6 Months	HNO3 to pH <2
B3FW03	N	W	1-23-18	0715	1x250-mL P	TRITIUM_DIST_LSC: COMMON	6 Months	None

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Relinquished By	Received By
Juan Aguilar /CHPRC — JAN 23 2018 1010 (Print First and Last Name / Signature / Date/Time)	Lesly Wall /CHPRC — JAN 23 2018 1010 (Print First and Last Name / Signature / Date/Time)
Lesly Wall /CHPRC — JAN 23 2018 1400 (Print First and Last Name / Signature / Date/Time)	FEDEX (Print First and Last Name / Signature / Date/Time)
1/25/18 FedEX FX (Print First and Last Name / Signature / Date/Time)	SBOONE 11/25/18 855 (Print First and Last Name / Signature / Date/Time)
(Print First and Last Name / Signature / Date/Time)	(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:

Printed On 11/29/2017 FSR ID = FSR54129 A-6004-842 (REV 3)

Revision 0

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST 442240	C.O.C. # S18-001-122 Page 1 of 1

Collector:	**Contact/Requester:** Karen Waters-Husted	**Telephone No.:** 509-376-4650
SAF No.: S18-001	**Sampling Origin:** Hanford Site	**Purchase Order/Charge Code:** 300071
Project Title: SURV, JANUARY 2018	**Logbook No.:** HNF-N-506 -97146	**Ice Chest No.:** GWS-677
Shipped To (Lab): GEL Laboratories, LLC	**Method of Shipment** Commercial Carrier	**Bill of Lading/Air Bill No.:** 771303203276
Protocol SURV	**Priority:** 30 Days	**Offsite Property No.:** 8980

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
B3FW04	N	W	1-23-18	0811	1x1-L P	9310_ALPHABETA_GPC: COMMON	6 Months	HNO3 to pH <2
B3FW04	N	W	↓	↓	1x4-L G/P	GAMMA_GS: COMMON	6 Months	HNO3 to pH <2
B3FW04	N	W			1x4-L G/P	I129LL_SEP_LEPS_GS_LL: COMMON	6 Months	None
B3FW04	N	W			1x1-L G/P	SRISO_SEP_PRECIP_GPC: COMMON	6 Months	HNO3 to pH <2
B3FW04	N	W	1-23-18	0811	1x250-mL P	TRITIUM_DIST_LSC: COMMON	6 Months	None

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Relinquished By / Print First and Last Name	Signature	Date/Time	Received By / Print First and Last Name	Signature	Date/Time
Juan Aguilar /CHPRC		JAN 2 3 2018 1010	Lesly Wall /CHPRC	Lesly Wall	JAN 2 3 2018 1010
Lesly Wall /CHPRC	Lesly Wall	JAN 2 3 2018 1400	FEDEX		
	MEH 1/25/18 FedEx FX		S BOONE		1/25/18 855

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:

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST 442240	C.O.C. # S18-001-126 Page 1 of 1

Collector: Juan Aguilar /CHPRC	**Contact/Requester:** Karen Waters-Husted	**Telephone No.:** 509-376-4650
SAF No.: S18-001	**Sampling Origin:** Hanford Site	**Purchase Order/Charge Code:** 300071
Project Title: SURV, JANUARY 2018	**Logbook No.:** HNF-N-506-97146	**Ice Chest No.:** GWS-677
Shipped To (Lab): GEL Laboratories, LLC	**Method of Shipment** Commercial Carrier	**Bill of Lading/Air Bill No.:** 771303203276
Protocol SURV	**Priority:** 30 Days	**Offsite Property No.:** 8990

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
B3FW81	N	W	1-23-18	0949	1x500-mL G/P	6010_METALS_ICP: GW 04; 6020_METALS_ICPMS: GW 01	6 Months	HNO3 to pH <2
B3FW85	Y	W	1-23-18	0949	1x500-mL G/P	6010_METALS_ICP: GW 04; 6020_METALS_ICPMS: GW 01	6 Months	HNO3 to pH <2

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Revision 0

Relinquished By	Received By
Juan Aguilar /CHPRC — JAN 23 2018 1010	Lesly Wall /CHPRC — JAN 23 2018 1010
Print First and Last Name — Signature — Date/Time	*Print First and Last Name — Signature — Date/Time*
Lesly Wall /CHPRC — JAN 23 2018 1400	FEDEX
Print First and Last Name — Signature — Date/Time	*Print First and Last Name — Signature — Date/Time*
M&H 1/25/18 FedEx FX	SBOONE 11/25/18 855
Print First and Last Name — Signature — Date/Time	*Print First and Last Name — Signature — Date/Time*
Relinquished By:	Received By:
Print First and Last Name — Signature — Date/Time	*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:

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST 442240	C.O.C. # S18-001-127 Page 1 of 1

Collector: Juan Aguilar /CHPRC	**Contact/Requester:** Karen Waters-Husted	**Telephone No.:** 509-376-4650
SAF No.: S18-001	**Sampling Origin:** Hanford Site	**Purchase Order/Charge Code:** 300071
Project Title: SURV, JANUARY 2018	**Logbook No.:** HNF-N-506-97146	**Ice Chest No.:** GWS-677
Shipped To (Lab): GEL Laboratories, LLC	**Method of Shipment** Commercial Carrier	**Bill of Lading/Air Bill No.:** 771303232 76
Protocol SURV	**Priority:** 30 Days	**Offsite Property No.:** 8990

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
B3FW82	N	W	1-23-18	0949	1x500-mL G/P	6010_METALS_ICP: GW 04; 6020_METALS_ICPMS: GW 01	6 Months	HNO3 to pH <2
B3FW86	Y	W	1-23-18	0949	1x500-mL G/P	6010_METALS_ICP: GW 04; 6020_METALS_ICPMS: GW 01	6 Months	HNO3 to pH <2

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Relinquished By: Juan Aguilar /CHPRC — Print First and Last Name	Signature	JAN 2 3 2018 1010 Date/Time	Received By: Lesly Wall /CHPRC — Print First and Last Name	Signature	JAN 2 3 2018 1010 Date/Time
Relinquished By: Lesly Wall /CHPRC — Print First and Last Name	Signature	JAN 2 3 2018 1400 Date/Time	Received By: FEDEX — Print First and Last Name	Signature	Date/Time
Relinquished By: — Print First and Last Name	Signature	1/25/18 FedEx Date/Time	Received By: — Print First and Last Name	Signature	1/25/18 855 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:

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST 4422470	C.O.C. # S18-001-384 Page 1 of 1

Collector: Larry Rosane /CHPRC	**Contact/Requester:** Karen Waters-Husted	**Telephone No.:** 509-376-4650
SAF No.: S18-001	**Sampling Origin:** Hanford Site	**Purchase Order/Charge Code:** 300071
Project Title: SURV, JANUARY 2018	**Logbook No.:** HNF-N-506 -96-84	**Ice Chest No.:** GWS-739
Shipped To (Lab): GEL Laboratories, LLC	**Method of Shipment** Commercial Carrier	**Bill of Lading/Air Bill No.:** 7713 0607 2816
Protocol SURV	**Priority:** 30 Days	**Offsite Property No.:** 8994

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
B3HD01	N	W	JAN 23 2018	0945	1x1-L P	9310_ALPHABETA_GPC: COMMON	6 Months	HNO3 to pH <2
B3HD01	N	W	↓	↓	1x4-L G/P	I129LL_SEP_LEPS_GS_LL: COMMON	6 Months	None
B3HD01	N	W	↓	↓	1x1-L G/P	SRISO_SEP_PRECIP_GPC: COMMON	6 Months	HNO3 to pH <2
B3HD01	N	W	JAN 23 2018	0945	1x250-mL P	TRITIUM_DIST_LSC: COMMON	6 Months	None

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Relinquished By / Print First and Last Name	Signature	Date/Time	Received By / Print First and Last Name	Signature	Date/Time
Larry Rosane /CHPRC	Larry Rosane	JAN 23 2018 1235	Lesly Wall /CHPRC	Lesly Wall	JAN 23 2018 1235
Lesly Wall /CHPRC	Lesly Wall	JAN 23 2018 1400	FEDEX		
	FedEx		S BOONE		1/24/18 900

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:

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST 442240	C.O.C. # S18-001-385 Page 1 of 1

Collector: Larry Rosane /CHPRC	**Contact/Requester:** Karen Waters-Husted	**Telephone No.:** 509-376-4650
SAF No.: S18-001	**Sampling Origin:** Hanford Site	**Purchase Order/Charge Code:** 300071 KW 1/23/18
Project Title: SURV, JANUARY 2018	**Logbook No.:** HNF-N-506 - 96 184	**Ice Chest No.:** ~~GWS~~ ~~GWS-3~~ ~~GWS-739~~
Shipped To (Lab): GEL Laboratories, LLC	**Method of Shipment** Commercial Carrier	**Bill of Lading/Air Bill No.:** 771360072810 GWS-739
Protocol SURV	**Priority:** 30 Days	**Offsite Property No.:** 8994

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
B3HD02	N	W	JAN 23 2018	1135	1x1-L P	9310_ALPHABETA_GPC: COMMON	6 Months	HNO3 to pH <2
B3HD02	N	W	↓	↓	1x4-L G/P	I129LL_SEP_LEPS_GS_LL: COMMON	6 Months	None
B3HD02	N	W	JAN 23 2018	1135	1x1-L G/P	SRISO_SEP_PRECIP_GPC: COMMON	6 Months	HNO3 to pH <2

Relinquished By	Received By	Matrix *
Larry Rosane /CHPRC — Larry Rosane — JAN 23 2018 1235 (Print First and Last Name / Signature / Date/Time)	Lesly Wall /CHPRC — Lesly Wall — JAN 23 2018 1235	S = Soil, SE = Sediment, SO = Solid, SL = Sludge, W = Water, O = Oil, A = Air; DS = Drum Solids, DL = Drum Liquid, T = Tissue, WI = Wipe, L = Liquid, V = Vegetation, X = Other
Lesly Wall /CHPRC — Lesly Wall — JAN 23 2018 1400	FEDEX	
NEH 1/25/18 — FedEx — FX	SBOONE — 1/24/18 — 900	

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

Printed On 1/3/2018 FSR ID = FSR55816 A-6004-842 (REV 3)

February 21, 2018 Revision 0

93165

CH2MHill Plateau Remediation Company	**CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** 442240	C.O.C. # S18-001-386 Page 1 of 1

Collector: Larry Rosane /CHPRC	**Contact/Requester:** Karen Waters-Husted	**Telephone No.:** 509-376-4650
SAF No.: S18-001	**Sampling Origin:** Hanford Site	**Purchase Order/Charge Code:** 300071
Project Title: SURV, JANUARY 2018	**Logbook No.:** HNF-N-506 ~96186	**Ice Chest No.:** GWS-739
Shipped To (Lab): GEL Laboratories, LLC	**Method of Shipment** Commercial Carrier	**Bill of Lading/Air Bill No.:** 771306072810
Protocol SURV	**Priority:** 30 Days	**Offsite Property No.:** 8994

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
B3HD03	N	W	JAN 23 2018	0700	1x1-L P	9310_ALPHABETA_GPC: COMMON	6 Months	HNO3 to pH <2
B3HD03	N	W	↓	↓	1x4-L G/P	I129LL_SEP_LEPS_GS_LL: COMMON	6 Months	None
B3HD03	N	W	JAN 23 2018	0700	1x1-L G/P	SRISO_SEP_PRECIP_GPC: COMMON	6 Months	HNO3 to pH <2

Relinquished By: Larry Rosane /CHPRC — Larry Rosane — JAN 23 2018 1235	Received By: Lesly Wall /CHPRC — Lesly Wall — JAN 23 2018 1235	Matrix *	
Print First and Last Name / Signature / Date/Time	Print First and Last Name / Signature / Date/Time	S = Soil	DS = Drum Solids
Relinquished By: Lesly Wall /CHPRC — Lesly Wall — JAN 23 2018 1400	Received By: FEDEX	SE = Sediment	DL = Drum Liquid
Print First and Last Name / Signature / Date/Time	Print First and Last Name / Signature / Date/Time	SO = Solid	T = Tissue
Relinquished By: NEH 1/25/18 FedEx FX	Received By: SBOONE 1/24/18 900	SL = Sludge	WI = Wipe
Print First and Last Name / Signature / Date/Time	Print First and Last Name / Signature / Date/Time	W = Water	L = Liquid
Relinquished By:	Received By:	O = Oil	V = Vegetation
Print First and Last Name / Signature / Date/Time	Print First and Last Name / Signature / Date/Time	A = Air	X = Other

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

Printed On 1/3/2018

FSR ID = FSR55817

A-6004-842 (REV 3)

February 21, 2018

Revision 0

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

442240

C.O.C. # S18-001-387

Page 1 of 1

Collector: Juan Aguilar /CHPRC	**Contact/Requester:** Karen Waters-Husted	**Telephone No.:** 509-376-4650
SAF No.: S18-001	**Sampling Origin:** Hanford Site	**Purchase Order/Charge Code:** 300071
Project Title: SURV, JANUARY 2018	**Logbook No.:** HNF-N-506 -97/45	**Ice Chest No.:** GWS-673
Shipped To (Lab): GEL Laboratories, LLC	**Method of Shipment** Commercial Carrier	**Bill of Lading/Air Bill No.:** 7713 0270 4876
Protocol SURV	**Priority:** 30 Days	**Offsite Property No.:** 8989

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
B3HD06	N	W	1-22-18	1200	1x1-L P	9310_ALPHABETA_GPC: COMMON	6 Months	HNO3 to pH <2
B3HD06	N	W	↓	↓	1x4-L G/P	I129LL_SEP_LEPS_GS_LL: COMMON	6 Months	None
B3HD06	N	W			1x1-L G/P	SRISO_SEP_PRECIP_GPC: COMMON	6 Months	HNO3 to pH <2
B3HD06	N	W			1x500-mL G/P	TC99_EIE_LSC: COMMON	6 Months	HNO3 to pH <2
B3HD06	N	W	1-22-18	1200	1x250-mL P	TRITIUM_DIST_LSC: COMMON	6 Months	None

	Print First and Last Name	Signature	Date/Time
Relinquished By:	Juan Aguilar /CHPRC		JAN 22 2018 1300
Received By:	SSU-1		JAN 22 2018 1300
Relinquished By:	SSU-1		JAN 23 2018 0845
Received By:	Jeff Lucas /CHPRC		JAN 23 2018 0845
Relinquished By:	Jeff Lucas /CHPRC		JAN 23 2018 1400
Received By:	FEDEX		
Relinquished By:	FedEx	MEH 1/25/18	
Received By:	SBOONE		1-24-18 900

Matrix *

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

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

Printed On 1/3/2018

FSR ID = FSR55818

A-6004-842 (REV 3)

February 21, 2018 Revision 0

97265

CH2MHill Plateau Remediation Company	**CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** 442240	C.O.C. # S18-001-390 Page 1 of 1

Collector: Chris Fulton CHPRC	**Contact/Requester:** Karen Waters-Husted	**Telephone No.:** 509-376-4650
SAF No.: S18-001	**Sampling Origin:** Hanford Site	**Purchase Order/Charge Code:** 300071
Project Title: SURV, JANUARY 2018	**Logbook No.:** HNF-N-506 - 96	**Ice Chest No.:** GWS-673
Shipped To (Lab): GEL Laboratories, LLC	**Method of Shipment** Commercial Carrier	**Bill of Lading/Air Bill No.:** 7713 0270 4876
Protocol SURV	**Priority:** 30 Days	**Offsite Property No.:** 59589

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
B3HD09	N	W	1-22-18	1118	1x1-L P	9310_ALPHABETA_GPC: COMMON	6 Months	HNO3 to pH <2
B3HD09	N	W	1	1	1x4-L G/P	I129LL_SEP_LEPS_GS_LL: COMMON	6 Months	None

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Revision 0

Relinquished By: Print First and Last Name	Signature	Date/Time	Received By: Print First and Last Name	Signature	Date/Time
Chris Fulton CHPRC		JAN 2 2 2018 1433	SSU-1		JAN 2 2 2018 1433
SSU-1		JAN 2 3 2018 0545	Jeff Lucas /CHPRC		JAN 2 3 2018 0545
Jeff Lucas /CHPRC		JAN 2 3 2018 1400	FEDEX		
FEDEX		1/25/18 FX	S BOONE		1/24/18 900

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:

0125

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST 44240	C.O.C. # S18-001-399 Page 1 of 1

Collector: Juan Aguilar /CHPRC	**Contact/Requester:** Karen Waters-Husted	**Telephone No.:** 509-376-4650
SAF No.: S18-001	**Sampling Origin:** Hanford Site	**Purchase Order/Charge Code:** 300071
Project Title: SURV, JANUARY 2018	**Logbook No.:** HNF-N-506-97146	**Ice Chest No.:** GWS-677
Shipped To (Lab): GEL Laboratories, LLC	**Method of Shipment** Commercial Carrier	**Bill of Lading/Air Bill No.:** 771303203276
Protocol SURV	**Priority:** 30 Days	**Offsite Property No.:** 8990

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
B3HD25	N	W	1-23-18	0949	1x1-L P	9310_ALPHABETA_GPC: COMMON	6 Months	HNO3 to pH <2
B3HD25	N	W	1-23-18	0949	1x4-L G/P	I129LL_SEP_LEPS_GS_LL: COMMON	6 Months	None

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Relinquished By:	Received By:
Juan Aguilar /CHPRC — JAN 2 3 2018 1010	Lesly Wall /CHPRC — JAN 2 3 2018 1010
Print First and Last Name — Signature — Date/Time	*Print First and Last Name — Signature — Date/Time*
Relinquished By: Lesly Wall /CHPRC — JAN 2 3 2018 1400	Received By: FEDEX
Print First and Last Name — Signature — Date/Time	*Print First and Last Name — Signature — Date/Time*
Relinquished By: KEH 1/25/18 FedEx FX	Received By: SBOONE 1/25/18 855
Print First and Last Name — Signature — Date/Time	*Print First and Last Name — Signature — Date/Time*
Relinquished By:	Received By:
Print First and Last Name — Signature — Date/Time	*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:

FSR ID = FSR55839

A-6004-842 (REV 3)

Printed On 1/3/2018

Revision 0

CH2MHill Plateau Remediation Company	**CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** 442240	C.O.C. # S18-001-400 Page 1 of 1

Collector: Juan Aguilar /CHPRC	**Contact/Requester:** Karen Waters-Husted	**Telephone No.:** 509-376-4650
SAF No.: S18-001	**Sampling Origin:** Hanford Site	**Purchase Order/Charge Code:** 300071
Project Title: SURV, JANUARY 2018	**Logbook No.:** HNF-N-506-97146	**Ice Chest No.:** 6605-607
Shipped To (Lab): GEL Laboratories, LLC	**Method of Shipment** Commercial Carrier	**Bill of Lading/Air Bill No.:** 771303203276
Protocol SURV	**Priority:** 30 Days	**Offsite Property No.:** 8990

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
B3HD26	N	W	1-23-18	0949	1x1-L P	9310_ALPHABETA_GPC: COMMON	6 Months	HNO3 to pH <2
B3HD26	N	W	1-2318	0949	1x4-L G/P	I129LL_SEP_LEPS_GS_LL: COMMON	6 Months	None

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Relinquished By: Juan Aguilar /CHPRC	JAN 2 3 2018	1010	Received By: Lesly Wall /CHPRC	JAN 2 3 2018	1010
Print First and Last Name	Signature	Date/Time	Print First and Last Name	Signature	Date/Time
Relinquished By: Lesly Wall /CHPRC	JAN 2 3 2018	1400	Received By: FEDEX		
Print First and Last Name	Signature	Date/Time	Print First and Last Name	Signature	Date/Time
Relinquished By:	1/25/18 FedEx	FX	Received By:	1/25/18	855
Print First and Last Name	Signature	Date/Time	Print First and Last Name	Signature	Date/Time
Relinquished By:			Received By:		
Print First and Last Name	Signature	Date/Time	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:

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: CPRC	SDG/AR/COC/Work Order: 442240
Received By: Stacy Boone	Date Received: 24-JAN-18
Carrier and Tracking Number	Circle Applicable: FedEx Express FedEx Ground UPS Field Services Courier Other 7713 0168 3168 - 1c 7713 0310 5655 - 1c 7713 0607 2810 - 1c 7713 0270 4876 - 1c 7713 0200 1499 - 1c

Suspected Hazard Information	Yes	No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
Shipped as a DOT Hazardous?		✓	Hazard Class Shipped: UN#:
COC/Samples marked or classified as radioactive?	✓		Maximum Net Counts Observed* (Observed Counts - Area Background Counts): 0 CPM / mR/Hr Classified as: Rad 1 Rad 2 Rad 3
Is package, COC, and/or Samples marked HAZ?		✓	If yes, select Hazards below, and contact the GEL Safety Group. PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:

	Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1	Shipping containers received intact and sealed?	✓			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2	Chain of custody documents included with shipment?	✓			
3	Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	✓			Preservation Method: Wet Ice Ice Packs Dry ice None Other: *all temperatures are recorded in Celsius TEMP:_____
4	Daily check performed and passed on IR temperature gun?	✓			Temperature Device Serial #: IR3-17 Secondary Temperature Device Serial # (If Applicable):
5	Sample containers intact and sealed?	✓			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
6	Samples requiring chemical preservation at proper pH?	✓			Sample ID's and Containers Affected: If Preservation added, Lot#:
7	Do any samples require Volatile Analysis?			✓	If Yes, Are Encores or Soil Kits present? Yes___ No___ (If yes, take to VOA Freezer) Do VOA vials contain acid preservation? Yes No___ N/A___ (If unknown, select No) VOA vials free of headspace? Yes___ No___ N/A___ Sample ID's and containers affected:
8	Samples received within holding time?	✓			ID's and tests affected:
9	Sample ID's on COC match ID's on bottles?	✓			Sample ID's and containers affected:
10	Date & time on COC match date & time on bottles?	✓			Sample ID's affected:
11	Number of containers received match number indicated on COC?	✓			Sample ID's affected:
12	Are sample containers identifiable as GEL provided?			✓	
13	COC form is properly signed in relinquished/received sections?	✓			

Comments (Use Continuation Form if needed):

PM (or PMA) review: Initials MEH Date 1/25/18 Page 1 of 1

GL-CHL-SR-001 Rev 5

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: CPRC	**SDG/AR/COC/Work Order:** 442240
Received By: STACY BOONE	**Date Received:** 1/25/2018
Carrier and Tracking Number	Circle Applicable: FedEx Express FedEx Ground UPS Field Services Courier Other 7894 5768 7907

Suspected Hazard Information	Yes	No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
Shipped as a DOT Hazardous?		✓	Hazard Class Shipped: UN#:
COC/Samples marked or classified as radioactive?	✓		Maximum Net Counts Observed* (Observed Counts - Area Background Counts): 0 CPM / mR/Hr **Classified as: Rad 1 Rad 2 Rad 3**
Is package, COC, and/or Samples marked HAZ?		✓	If yes, select Hazards below, and contact the GEL Safety Group. PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:

	Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1	Shipping containers received intact and sealed?	✓			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2	Chain of custody documents included with shipment?	✓			
3	Samples requiring cold preservation within (0 ≤ 6 deg. C)?*		✓		Preservation Method: Wet Ice Ice Packs Dry ice None Other: *all temperatures are recorded in Celsius TEMP: 15°C
4	Daily check performed and passed on IR temperature gun?	✓			**Temperature Device Serial #:** IR3-17 Secondary Temperature Device Serial # (If Applicable):
5	Sample containers intact and sealed?	✓			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
6	Samples requiring chemical preservation at proper pH?	✓			Sample ID's and Containers Affected: If Preservation added, Lot#:
7	Do any samples require Volatile Analysis?			✓	If Yes, Are Encores or Soil Kits present? Yes___ No___ (If yes, take to VOA Freezer) Do VOA vials contain acid preservation? Yes No___ N/A___ (If unknown, select No) VOA vials free of headspace? Yes___ No___ N/A___ Sample ID's and containers affected:
8	Samples received within holding time?	✓			ID's and tests affected:
9	Sample ID's on COC match ID's on bottles?	✓			Sample ID's and containers affected:
10	Date & time on COC match date & time on bottles?	✓			Sample ID's affected:
11	Number of containers received match number indicated on COC?	✓			Sample ID's affected:
12	Are sample containers identifiable as GEL provided?			✓	
13	COC form is properly signed in relinquished/received sections?	✓			

Comments (Use Continuation Form if needed):

PM (or PMA) review: Initials MEH Date 1/25/18 Page 1 of 1

GL-CHL-SR-001 Rev 5

Data Review Qualifier Definitions

GEL LABORATORIES LLC
2040 Savage Road Charleston, SC 29407 (843) 556−8171

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 (0rganics 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 >/= 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 >= 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 >= 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 21 February 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 Radchem	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 #: GEL442240
Work Order #: 442240

Product: **Determination of Metals by ICP**
Analytical Method: SW846 3005A/6010D
Analytical Procedure: GL-MA-E-013 REV# 30
Analytical Batch: 1734007

Product: **Determination of Metals by ICP-MS**
Analytical Method: SW846 3005A/6020B
Analytical Procedure: GL-MA-E-014 REV# 32
Analytical Batch: 1734013

Preparation Method: SW846 3005A
Preparation Procedure: GL-MA-E-006 REV# 14
Preparation Batches: 1734005 and 1734012

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

GEL Sample ID#	Client Sample Identification
442240001	B3FWJ4
442240002	B3FW90
442240003	B3FVV0
442240004	B3FVV1
442240005	B3FX35
442240006	B3FX37
442240007	B3FX39
442240008	B3FX43
442240009	B3FX44
442240010	B3FX40
442240013	B3FW81
442240014	B3FW85
442240015	B3FW82
442240016	B3FW86
1203958295	Method Blank (MB)**ICP**
1203958296	Laboratory Control Sample (LCS)
1203958299	442240001(B3FWJ4L) Serial Dilution (SD)
1203958297	442240001(B3FWJ4S) Matrix Spike (MS)
1203958298	442240001(B3FWJ4SD) Matrix Spike Duplicate (MSD)
1203958310	Method Blank (MB)**ICP-MS**
1203958311	Laboratory Control Sample (LCS)
1203958314	442240001(B3FWJ4L) Serial Dilution (SD)
1203958312	442240001(B3FWJ4S) Matrix Spike (MS)
1203958313	442240001(B3FWJ4SD) 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

CRDL/PQL Requirements
The PQL standard recoveries for SW846 6010C or 6010D met the control limits with the exception of potassium. Client sample concentrations were less than the MDL or greater than two times the PQL; therefore the data were not adversely affected. 442240001 (B3FWJ4), 442240002 (B3FW90), 442240003 (B3FVV0), 442240004 (B3FVV1), 442240005 (B3FX35), 442240006 (B3FX37), 442240007 (B3FX39), 442240008 (B3FX43), 442240009 (B3FX44), 442240010 (B3FX40), 442240013 (B3FW81), 442240014 (B3FW85), 442240015 (B3FW82) and 442240016 (B3FW86)-ICP.

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

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: GEL442240 GEL Work Order: 442240

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.

M Duplicate precision not met.

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: Jamie Johnson**

Date: 20 FEB 2018 **Title: Group Leader**

Sample Data Summary

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

SDG No: GEL442240 **CONTRACT:** CPRC0S18001 **METHOD TYPE:** SW846

SAMPLE ID: 442240001 **BASIS:** As Received **DATE COLLECTED** 22−JAN−18

CLIENT ID: B3FWJ4 **LEVEL:** Low **DATE RECEIVED** 24−JAN−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	01/29/18 21:44	180129−3	1734013
7440−36−0	Antimony	1	ug/L	U	1	3	3	1	MS	BAJ	01/30/18 16:19	180130−4	1734013
7440−38−2	Arsenic	5.94	ug/L		2	5	5	1	MS	BAJ	01/29/18 21:44	180129−3	1734013
7440−39−3	Barium	57.9	ug/L		0.67	2	2	1	MS	BAJ	01/29/18 21:44	180129−3	1734013
7440−41−7	Beryllium	0.20	ug/L	U	0.2	0.5	0.5	1	MS	BAJ	01/29/18 21:44	180129−3	1734013
7440−42−8	Boron	42.1	ug/L	B	15	50	50	1	P	HSC	02/06/18 20:31	020618A−1	1734007
7440−43−9	Cadmium	0.30	ug/L	U	0.3	1	1	1	MS	BAJ	01/29/18 21:44	180129−3	1734013
7440−70−2	Calcium	61700	ug/L		50	200	200	1	P	HSC	02/06/18 20:31	020618A−1	1734007
7440−47−3	Chromium	3.4	ug/L	B	3	10	10	1	MS	BAJ	01/29/18 21:44	180129−3	1734013
7440−48−4	Cobalt	0.30	ug/L	U	0.3	1	1	1	MS	BAJ	01/29/18 21:44	180129−3	1734013
7440−50−8	Copper	0.373	ug/L	B	0.3	1	1	1	MS	BAJ	01/29/18 21:44	180129−3	1734013
7439−89−6	Iron	30	ug/L	U	30	100	100	1	P	HSC	02/06/18 20:31	020618A−1	1734007
7439−92−1	Lead	0.50	ug/L	U	0.5	2	2	1	MS	BAJ	01/29/18 21:44	180129−3	1734013
7439−95−4	Magnesium	18300	ug/L		110	300	300	1	P	HSC	02/06/18 20:31	020618A−1	1734007
7439−96−5	Manganese	1.01	ug/L	B	1	5	5	1	MS	BAJ	01/29/18 21:44	180129−3	1734013
7439−98−7	Molybdenum	6.28	ug/L		0.2	0.5	0.5	1	MS	BAJ	01/29/18 21:44	180129−3	1734013
7440−02−0	Nickel	3.23	ug/L		0.6	2	2	1	MS	BAJ	01/29/18 21:44	180129−3	1734013
7440−09−7	Potassium	7290	ug/L		50	150	150	1	P	HSC	02/06/18 20:31	020618A−1	1734007
7782−49−2	Selenium	6.16	ug/L		2	5	5	1	MS	BAJ	01/29/18 21:44	180129−3	1734013
7440−22−4	Silver	0.30	ug/L	U	0.3	1	1	1	MS	BAJ	01/29/18 21:44	180129−3	1734013
7440−23−5	Sodium	24900	ug/L		100	300	300	1	P	TXT1	02/20/18 13:06	022018−2	1734007
7440−24−6	Strontium	334	ug/L		2	10	10	1	MS	BAJ	01/29/18 21:44	180129−3	1734013
7440−28−0	Thallium	0.60	ug/L	U	0.6	2	2	1	MS	BAJ	01/29/18 21:44	180129−3	1734013
7440−29−1	Thorium	0.70	ug/L	U	0.7	2	2	1	MS	BAJ	01/29/18 21:44	180129−3	1734013
7440−31−5	Tin	1	ug/L	U	1	5	5	1	MS	BAJ	01/29/18 21:44	180129−3	1734013
7440−61−1	Uranium	10.8	ug/L		0.067	0.2	0.2	1	MS	BAJ	01/29/18 21:44	180129−3	1734013
7440−62−2	Vanadium	18.2	ug/L		1	5	5	1	P	HSC	02/06/18 20:31	020618A−1	1734007
7440−66−6	Zinc	3.3	ug/L	U	3.3	10	10	1	MS	BAJ	01/30/18 16:19	180130−4	1734013

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
1734007	1734005	SW846 3005A	50	mL	50	mL	01/25/18	JXM8
1734013	1734012	SW846 3005A	50	mL	50	mL	01/25/18	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: GEL442240 **CONTRACT:** CPRC0S18001 **METHOD TYPE:** SW846

SAMPLE ID: 442240002 **BASIS:** As Received **DATE COLLECTED** 22−JAN−18

CLIENT ID: B3FW90 **LEVEL:** Low **DATE RECEIVED** 24−JAN−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	01/29/18 22:00	180129−3	1734013
7440−36−0	Antimony	1	ug/L	U	1	3	3	1	MS	BAJ	01/30/18 16:27	180130−4	1734013
7440−38−2	Arsenic	6.03	ug/L		2	5	5	1	MS	BAJ	01/29/18 22:00	180129−3	1734013
7440−39−3	Barium	58.2	ug/L		0.67	2	2	1	MS	BAJ	01/29/18 22:00	180129−3	1734013
7440−41−7	Beryllium	0.20	ug/L	U	0.2	0.5	0.5	1	MS	BAJ	01/29/18 22:00	180129−3	1734013
7440−42−8	Boron	41.8	ug/L	B	15	50	50	1	P	HSC	02/06/18 20:44	020618A−1	1734007
7440−43−9	Cadmium	0.30	ug/L	U	0.3	1	1	1	MS	BAJ	01/29/18 22:00	180129−3	1734013
7440−70−2	Calcium	62400	ug/L		50	200	200	1	P	HSC	02/06/18 20:44	020618A−1	1734007
7440−47−3	Chromium	9.7	ug/L	B	3	10	10	1	MS	BAJ	01/29/18 22:00	180129−3	1734013
7440−48−4	Cobalt	0.30	ug/L	U	0.3	1	1	1	MS	BAJ	01/29/18 22:00	180129−3	1734013
7440−50−8	Copper	0.417	ug/L	B	0.3	1	1	1	MS	BAJ	01/29/18 22:00	180129−3	1734013
7439−89−6	Iron	30	ug/L	U	30	100	100	1	P	HSC	02/06/18 20:44	020618A−1	1734007
7439−92−1	Lead	0.50	ug/L	U	0.5	2	2	1	MS	BAJ	01/29/18 22:00	180129−3	1734013
7439−95−4	Magnesium	18500	ug/L		110	300	300	1	P	HSC	02/06/18 20:44	020618A−1	1734007
7439−96−5	Manganese	1.1	ug/L	B	1	5	5	1	MS	BAJ	01/29/18 22:00	180129−3	1734013
7439−98−7	Molybdenum	6.46	ug/L		0.2	0.5	0.5	1	MS	BAJ	01/29/18 22:00	180129−3	1734013
7440−02−0	Nickel	5.02	ug/L		0.6	2	2	1	MS	BAJ	01/29/18 22:00	180129−3	1734013
7440−09−7	Potassium	7440	ug/L		50	150	150	1	P	HSC	02/06/18 20:44	020618A−1	1734007
7782−49−2	Selenium	6.44	ug/L		2	5	5	1	MS	BAJ	01/29/18 22:00	180129−3	1734013
7440−22−4	Silver	0.30	ug/L	U	0.3	1	1	1	MS	BAJ	01/29/18 22:00	180129−3	1734013
7440−23−5	Sodium	25100	ug/L		100	300	300	1	P	TXT1	02/20/18 13:21	022018−2	1734007
7440−24−6	Strontium	341	ug/L		2	10	10	1	MS	BAJ	01/29/18 22:00	180129−3	1734013
7440−28−0	Thallium	0.60	ug/L	U	0.6	2	2	1	MS	BAJ	01/29/18 22:00	180129−3	1734013
7440−29−1	Thorium	0.70	ug/L	U	0.7	2	2	1	MS	BAJ	01/29/18 22:00	180129−3	1734013
7440−31−5	Tin	1	ug/L	U	1	5	5	1	MS	BAJ	01/29/18 22:00	180129−3	1734013
7440−61−1	Uranium	10.9	ug/L		0.067	0.2	0.2	1	MS	BAJ	01/29/18 22:00	180129−3	1734013
7440−62−2	Vanadium	18.8	ug/L		1	5	5	1	P	HSC	02/06/18 20:44	020618A−1	1734007
7440−66−6	Zinc	3.3	ug/L	U	3.3	10	10	1	MS	BAJ	01/30/18 16:27	180130−4	1734013

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
1734007	1734005	SW846 3005A	50	mL	50	mL	01/25/18	JXM8
1734013	1734012	SW846 3005A	50	mL	50	mL	01/25/18	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: GEL442240 **CONTRACT:** CPRC0S18001 **METHOD TYPE:** SW846

SAMPLE ID: 442240003 **BASIS:** As Received **DATE COLLECTED** 22−JAN−18

CLIENT ID: B3FVV0 **LEVEL:** Low **DATE RECEIVED** 24−JAN−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	01/29/18 22:10	180129−3	1734013
7440−36−0	Antimony	1	ug/L	U	1	3	3	1	MS	BAJ	01/30/18 16:32	180130−4	1734013
7440−38−2	Arsenic	4.16	ug/L	B	2	5	5	1	MS	BAJ	01/29/18 22:10	180129−3	1734013
7440−39−3	Barium	61.5	ug/L		0.67	2	2	1	MS	BAJ	01/29/18 22:10	180129−3	1734013
7440−41−7	Beryllium	0.20	ug/L	U	0.2	0.5	0.5	1	MS	BAJ	01/29/18 22:10	180129−3	1734013
7440−42−8	Boron	21.2	ug/L	B	15	50	50	1	P	HSC	02/06/18 20:47	020618A−1	1734007
7440−43−9	Cadmium	0.30	ug/L	U	0.3	1	1	1	MS	BAJ	01/29/18 22:10	180129−3	1734013
7440−70−2	Calcium	51200	ug/L		50	200	200	1	P	HSC	02/06/18 20:47	020618A−1	1734007
7440−47−3	Chromium	10.3	ug/L		3	10	10	1	MS	BAJ	01/29/18 22:10	180129−3	1734013
7440−48−4	Cobalt	0.30	ug/L	U	0.3	1	1	1	MS	BAJ	01/29/18 22:10	180129−3	1734013
7440−50−8	Copper	0.30	ug/L	U	0.3	1	1	1	MS	BAJ	01/29/18 22:10	180129−3	1734013
7439−89−6	Iron	30	ug/L	U	30	100	100	1	P	HSC	02/06/18 20:47	020618A−1	1734007
7439−92−1	Lead	0.50	ug/L	U	0.5	2	2	1	MS	BAJ	01/29/18 22:10	180129−3	1734013
7439−95−4	Magnesium	16500	ug/L		110	300	300	1	P	HSC	02/06/18 20:47	020618A−1	1734007
7439−96−5	Manganese	1	ug/L	U	1	5	5	1	MS	BAJ	01/29/18 22:10	180129−3	1734013
7439−98−7	Molybdenum	7.65	ug/L		0.2	0.5	0.5	1	MS	BAJ	01/29/18 22:10	180129−3	1734013
7440−02−0	Nickel	0.60	ug/L	U	0.6	2	2	1	MS	BAJ	01/29/18 22:10	180129−3	1734013
7440−09−7	Potassium	6610	ug/L		50	150	150	1	P	HSC	02/06/18 20:47	020618A−1	1734007
7782−49−2	Selenium	4.56	ug/L	B	2	5	5	1	MS	BAJ	01/29/18 22:10	180129−3	1734013
7440−22−4	Silver	0.30	ug/L	U	0.3	1	1	1	MS	BAJ	01/29/18 22:10	180129−3	1734013
7440−23−5	Sodium	20900	ug/L		100	300	300	1	P	TXT1	02/20/18 13:24	022018−2	1734007
7440−24−6	Strontium	254	ug/L		2	10	10	1	MS	BAJ	01/29/18 22:10	180129−3	1734013
7440−28−0	Thallium	0.60	ug/L	U	0.6	2	2	1	MS	BAJ	01/29/18 22:10	180129−3	1734013
7440−29−1	Thorium	0.70	ug/L	U	0.7	2	2	1	MS	BAJ	01/29/18 22:10	180129−3	1734013
7440−31−5	Tin	1	ug/L	U	1	5	5	1	MS	BAJ	01/29/18 22:10	180129−3	1734013
7440−61−1	Uranium	4.1	ug/L		0.067	0.2	0.2	1	MS	BAJ	01/29/18 22:10	180129−3	1734013
7440−62−2	Vanadium	19.1	ug/L		1	5	5	1	P	HSC	02/06/18 20:47	020618A−1	1734007
7440−66−6	Zinc	3.3	ug/L	U	3.3	10	10	1	MS	BAJ	01/30/18 16:32	180130−4	1734013

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
1734007	1734005	SW846 3005A	50	mL	50	mL	01/25/18	JXM8
1734013	1734012	SW846 3005A	50	mL	50	mL	01/25/18	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: GEL442240 **CONTRACT:** CPRC0S18001 **METHOD TYPE:** SW846

SAMPLE ID: 442240004 **BASIS:** As Received **DATE COLLECTED** 22−JAN−18

CLIENT ID: B3FVV1 **LEVEL:** Low **DATE RECEIVED** 24−JAN−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	01/29/18 22:14	180129−3	1734013
7440−36−0	Antimony	1	ug/L	U	1	3	3	1	MS	BAJ	01/30/18 16:34	180130−4	1734013
7440−38−2	Arsenic	4.09	ug/L	B	2	5	5	1	MS	BAJ	01/29/18 22:14	180129−3	1734013
7440−39−3	Barium	60.1	ug/L		0.67	2	2	1	MS	BAJ	01/29/18 22:14	180129−3	1734013
7440−41−7	Beryllium	0.20	ug/L	U	0.2	0.5	0.5	1	MS	BAJ	01/29/18 22:14	180129−3	1734013
7440−42−8	Boron	21.6	ug/L	B	15	50	50	1	P	HSC	02/06/18 20:50	020618A−1	1734007
7440−43−9	Cadmium	0.30	ug/L	U	0.3	1	1	1	MS	BAJ	01/29/18 22:14	180129−3	1734013
7440−70−2	Calcium	50300	ug/L		50	200	200	1	P	HSC	02/06/18 20:50	020618A−1	1734007
7440−47−3	Chromium	10.3	ug/L		3	10	10	1	MS	BAJ	01/29/18 22:14	180129−3	1734013
7440−48−4	Cobalt	0.30	ug/L	U	0.3	1	1	1	MS	BAJ	01/29/18 22:14	180129−3	1734013
7440−50−8	Copper	0.30	ug/L	U	0.3	1	1	1	MS	BAJ	01/29/18 22:14	180129−3	1734013
7439−89−6	Iron	30	ug/L	U	30	100	100	1	P	HSC	02/06/18 20:50	020618A−1	1734007
7439−92−1	Lead	0.50	ug/L	U	0.5	2	2	1	MS	BAJ	01/29/18 22:14	180129−3	1734013
7439−95−4	Magnesium	16200	ug/L		110	300	300	1	P	HSC	02/06/18 20:50	020618A−1	1734007
7439−96−5	Manganese	1	ug/L	U	1	5	5	1	MS	BAJ	01/29/18 22:14	180129−3	1734013
7439−98−7	Molybdenum	7.99	ug/L		0.2	0.5	0.5	1	MS	BAJ	01/29/18 22:14	180129−3	1734013
7440−02−0	Nickel	0.917	ug/L	B	0.6	2	2	1	MS	BAJ	01/29/18 22:14	180129−3	1734013
7440−09−7	Potassium	6510	ug/L		50	150	150	1	P	HSC	02/06/18 20:50	020618A−1	1734007
7782−49−2	Selenium	4.28	ug/L	B	2	5	5	1	MS	BAJ	01/29/18 22:14	180129−3	1734013
7440−22−4	Silver	0.30	ug/L	U	0.3	1	1	1	MS	BAJ	01/29/18 22:14	180129−3	1734013
7440−23−5	Sodium	20500	ug/L		100	300	300	1	P	TXT1	02/20/18 13:27	022018−2	1734007
7440−24−6	Strontium	255	ug/L		2	10	10	1	MS	BAJ	01/29/18 22:14	180129−3	1734013
7440−28−0	Thallium	0.60	ug/L	U	0.6	2	2	1	MS	BAJ	01/29/18 22:14	180129−3	1734013
7440−29−1	Thorium	0.70	ug/L	U	0.7	2	2	1	MS	BAJ	01/29/18 22:14	180129−3	1734013
7440−31−5	Tin	1	ug/L	U	1	5	5	1	MS	BAJ	01/29/18 22:14	180129−3	1734013
7440−61−1	Uranium	4.03	ug/L		0.067	0.2	0.2	1	MS	BAJ	01/29/18 22:14	180129−3	1734013
7440−62−2	Vanadium	18.6	ug/L		1	5	5	1	P	HSC	02/06/18 20:50	020618A−1	1734007
7440−66−6	Zinc	3.3	ug/L	U	3.3	10	10	1	MS	BAJ	01/30/18 16:34	180130−4	1734013

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
1734007	1734005	SW846 3005A	50	mL	50	mL	01/25/18	JXM8
1734013	1734012	SW846 3005A	50	mL	50	mL	01/25/18	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: GEL442240 **CONTRACT:** CPRC0S18001 **METHOD TYPE:** SW846

SAMPLE ID: 442240005 **BASIS:** As Received **DATE COLLECTED** 23−JAN−18

CLIENT ID: B3FX35 **LEVEL:** Low **DATE RECEIVED** 24−JAN−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	01/29/18 22:17	180129−3	1734013
7440−36−0	Antimony	1	ug/L	U	1	3	3	1	MS	BAJ	01/30/18 16:35	180130−4	1734013
7440−38−2	Arsenic	6.48	ug/L		2	5	5	1	MS	BAJ	01/29/18 22:17	180129−3	1734013
7440−39−3	Barium	29.7	ug/L		0.67	2	2	1	MS	BAJ	01/29/18 22:17	180129−3	1734013
7440−41−7	Beryllium	0.20	ug/L	U	0.2	0.5	0.5	1	MS	BAJ	01/29/18 22:17	180129−3	1734013
7440−42−8	Boron	15	ug/L	U	15	50	50	1	P	HSC	02/06/18 20:59	020618A−1	1734007
7440−43−9	Cadmium	0.30	ug/L	U	0.3	1	1	1	MS	BAJ	01/29/18 22:17	180129−3	1734013
7440−70−2	Calcium	37800	ug/L		50	200	200	1	P	HSC	02/06/18 20:59	020618A−1	1734007
7440−47−3	Chromium	7.48	ug/L	B	3	10	10	1	MS	BAJ	01/29/18 22:17	180129−3	1734013
7440−48−4	Cobalt	0.30	ug/L	U	0.3	1	1	1	MS	BAJ	01/29/18 22:17	180129−3	1734013
7440−50−8	Copper	0.705	ug/L	B	0.3	1	1	1	MS	BAJ	01/29/18 22:17	180129−3	1734013
7439−89−6	Iron	346	ug/L		30	100	100	1	P	HSC	02/06/18 20:59	020618A−1	1734007
7439−92−1	Lead	0.50	ug/L	U	0.5	2	2	1	MS	BAJ	01/29/18 22:17	180129−3	1734013
7439−95−4	Magnesium	9750	ug/L		110	300	300	1	P	HSC	02/06/18 20:59	020618A−1	1734007
7439−96−5	Manganese	26.6	ug/L		1	5	5	1	MS	BAJ	01/29/18 22:17	180129−3	1734013
7439−98−7	Molybdenum	1.89	ug/L		0.2	0.5	0.5	1	MS	BAJ	01/29/18 22:17	180129−3	1734013
7440−02−0	Nickel	4.09	ug/L		0.6	2	2	1	MS	BAJ	01/29/18 22:17	180129−3	1734013
7440−09−7	Potassium	5990	ug/L		50	150	150	1	P	HSC	02/06/18 20:59	020618A−1	1734007
7782−49−2	Selenium	2.79	ug/L	B	2	5	5	1	MS	BAJ	01/29/18 22:17	180129−3	1734013
7440−22−4	Silver	0.30	ug/L	U	0.3	1	1	1	MS	BAJ	01/29/18 22:17	180129−3	1734013
7440−23−5	Sodium	15000	ug/L		100	300	300	1	P	TXT1	02/20/18 13:30	022018−2	1734007
7440−24−6	Strontium	182	ug/L		2	10	10	1	MS	BAJ	01/29/18 22:17	180129−3	1734013
7440−28−0	Thallium	0.60	ug/L	U	0.6	2	2	1	MS	BAJ	01/29/18 22:17	180129−3	1734013
7440−29−1	Thorium	0.70	ug/L	U	0.7	2	2	1	MS	BAJ	01/29/18 22:17	180129−3	1734013
7440−31−5	Tin	1	ug/L	U	1	5	5	1	MS	BAJ	01/29/18 22:17	180129−3	1734013
7440−61−1	Uranium	1.79	ug/L		0.067	0.2	0.2	1	MS	BAJ	01/29/18 22:17	180129−3	1734013
7440−62−2	Vanadium	17.3	ug/L		1	5	5	1	P	HSC	02/06/18 20:59	020618A−1	1734007
7440−66−6	Zinc	3.3	ug/L	U	3.3	10	10	1	MS	BAJ	01/30/18 16:35	180130−4	1734013

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
1734007	1734005	SW846 3005A	50	mL	50	mL	01/25/18	JXM8
1734013	1734012	SW846 3005A	50	mL	50	mL	01/25/18	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: GEL442240 **CONTRACT:** CPRC0S18001 **METHOD TYPE:** SW846

SAMPLE ID: 442240006 **BASIS:** As Received **DATE COLLECTED** 23−JAN−18

CLIENT ID: B3FX37 **LEVEL:** Low **DATE RECEIVED** 24−JAN−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	01/29/18 22:20	180129−3	1734013
7440−36−0	Antimony	1	ug/L	U	1	3	3	1	MS	BAJ	01/30/18 16:37	180130−4	1734013
7440−38−2	Arsenic	6.78	ug/L		2	5	5	1	MS	BAJ	01/29/18 22:20	180129−3	1734013
7440−39−3	Barium	30.5	ug/L		0.67	2	2	1	MS	BAJ	01/29/18 22:20	180129−3	1734013
7440−41−7	Beryllium	0.20	ug/L	U	0.2	0.5	0.5	1	MS	BAJ	01/29/18 22:20	180129−3	1734013
7440−42−8	Boron	15	ug/L	U	15	50	50	1	P	HSC	02/06/18 21:02	020618A−1	1734007
7440−43−9	Cadmium	0.30	ug/L	U	0.3	1	1	1	MS	BAJ	01/29/18 22:20	180129−3	1734013
7440−70−2	Calcium	38600	ug/L		50	200	200	1	P	HSC	02/06/18 21:02	020618A−1	1734007
7440−47−3	Chromium	3	ug/L	U	3	10	10	1	MS	BAJ	01/29/18 22:20	180129−3	1734013
7440−48−4	Cobalt	0.314	ug/L	B	0.3	1	1	1	MS	BAJ	01/29/18 22:20	180129−3	1734013
7440−50−8	Copper	0.306	ug/L	B	0.3	1	1	1	MS	BAJ	01/29/18 22:20	180129−3	1734013
7439−89−6	Iron	72.2	ug/L	B	30	100	100	1	P	HSC	02/06/18 21:02	020618A−1	1734007
7439−92−1	Lead	0.50	ug/L	U	0.5	2	2	1	MS	BAJ	01/29/18 22:20	180129−3	1734013
7439−95−4	Magnesium	10100	ug/L		110	300	300	1	P	HSC	02/06/18 21:02	020618A−1	1734007
7439−96−5	Manganese	21.4	ug/L		1	5	5	1	MS	BAJ	01/29/18 22:20	180129−3	1734013
7439−98−7	Molybdenum	2.04	ug/L		0.2	0.5	0.5	1	MS	BAJ	01/29/18 22:20	180129−3	1734013
7440−02−0	Nickel	2.95	ug/L		0.6	2	2	1	MS	BAJ	01/29/18 22:20	180129−3	1734013
7440−09−7	Potassium	6120	ug/L		50	150	150	1	P	HSC	02/06/18 21:02	020618A−1	1734007
7782−49−2	Selenium	2.7	ug/L	B	2	5	5	1	MS	BAJ	01/29/18 22:20	180129−3	1734013
7440−22−4	Silver	0.30	ug/L	U	0.3	1	1	1	MS	BAJ	01/29/18 22:20	180129−3	1734013
7440−23−5	Sodium	15100	ug/L		100	300	300	1	P	TXT1	02/20/18 13:33	022018−2	1734007
7440−24−6	Strontium	186	ug/L		2	10	10	1	MS	BAJ	01/29/18 22:20	180129−3	1734013
7440−28−0	Thallium	0.60	ug/L	U	0.6	2	2	1	MS	BAJ	01/29/18 22:20	180129−3	1734013
7440−29−1	Thorium	0.70	ug/L	U	0.7	2	2	1	MS	BAJ	01/29/18 22:20	180129−3	1734013
7440−31−5	Tin	1	ug/L	U	1	5	5	1	MS	BAJ	01/29/18 22:20	180129−3	1734013
7440−61−1	Uranium	1.84	ug/L		0.067	0.2	0.2	1	MS	BAJ	01/29/18 22:20	180129−3	1734013
7440−62−2	Vanadium	17.2	ug/L		1	5	5	1	P	HSC	02/06/18 21:02	020618A−1	1734007
7440−66−6	Zinc	3.3	ug/L	U	3.3	10	10	1	MS	BAJ	01/30/18 16:37	180130−4	1734013

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
1734007	1734005	SW846 3005A	50	mL	50	mL	01/25/18	JXM8
1734013	1734012	SW846 3005A	50	mL	50	mL	01/25/18	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: GEL442240 **CONTRACT:** CPRC0S18001 **METHOD TYPE:** SW846

SAMPLE ID: 442240007 **BASIS:** As Received **DATE COLLECTED** 23−JAN−18

CLIENT ID: B3FX39 **LEVEL:** Low **DATE RECEIVED** 24−JAN−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	01/29/18 22:24	180129−3	1734013
7440−36−0	Antimony	1	ug/L	U	1	3	3	1	MS	BAJ	01/30/18 16:39	180130−4	1734013
7440−38−2	Arsenic	2	ug/L	U	2	5	5	1	MS	BAJ	01/29/18 22:24	180129−3	1734013
7440−39−3	Barium	0.670	ug/L	U	0.67	2	2	1	MS	BAJ	01/29/18 22:24	180129−3	1734013
7440−41−7	Beryllium	0.20	ug/L	U	0.2	0.5	0.5	1	MS	BAJ	01/29/18 22:24	180129−3	1734013
7440−42−8	Boron	15	ug/L	U	15	50	50	1	P	HSC	02/06/18 21:06	020618A−1	1734007
7440−43−9	Cadmium	0.30	ug/L	U	0.3	1	1	1	MS	BAJ	01/29/18 22:24	180129−3	1734013
7440−70−2	Calcium	50	ug/L	U	50	200	200	1	P	HSC	02/06/18 21:06	020618A−1	1734007
7440−47−3	Chromium	3	ug/L	U	3	10	10	1	MS	BAJ	01/29/18 22:24	180129−3	1734013
7440−48−4	Cobalt	0.30	ug/L	U	0.3	1	1	1	MS	BAJ	01/29/18 22:24	180129−3	1734013
7440−50−8	Copper	0.30	ug/L	U	0.3	1	1	1	MS	BAJ	01/29/18 22:24	180129−3	1734013
7439−89−6	Iron	30	ug/L	U	30	100	100	1	P	HSC	02/06/18 21:06	020618A−1	1734007
7439−92−1	Lead	0.50	ug/L	U	0.5	2	2	1	MS	BAJ	01/29/18 22:24	180129−3	1734013
7439−95−4	Magnesium	110	ug/L	U	110	300	300	1	P	HSC	02/06/18 21:06	020618A−1	1734007
7439−96−5	Manganese	1	ug/L	U	1	5	5	1	MS	BAJ	01/29/18 22:24	180129−3	1734013
7439−98−7	Molybdenum	0.20	ug/L	U	0.2	0.5	0.5	1	MS	BAJ	01/29/18 22:24	180129−3	1734013
7440−02−0	Nickel	0.60	ug/L	U	0.6	2	2	1	MS	BAJ	01/29/18 22:24	180129−3	1734013
7440−09−7	Potassium	50	ug/L	U	50	150	150	1	P	HSC	02/06/18 21:06	020618A−1	1734007
7782−49−2	Selenium	2	ug/L	U	2	5	5	1	MS	BAJ	01/29/18 22:24	180129−3	1734013
7440−22−4	Silver	0.30	ug/L	U	0.3	1	1	1	MS	BAJ	01/29/18 22:24	180129−3	1734013
7440−23−5	Sodium	100	ug/L	U	100	300	300	1	P	TXT1	02/20/18 13:36	022018−2	1734007
7440−24−6	Strontium	2	ug/L	U	2	10	10	1	MS	BAJ	01/29/18 22:24	180129−3	1734013
7440−28−0	Thallium	0.60	ug/L	U	0.6	2	2	1	MS	BAJ	01/29/18 22:24	180129−3	1734013
7440−29−1	Thorium	0.70	ug/L	U	0.7	2	2	1	MS	BAJ	01/29/18 22:24	180129−3	1734013
7440−31−5	Tin	1	ug/L	U	1	5	5	1	MS	BAJ	01/29/18 22:24	180129−3	1734013
7440−61−1	Uranium	0.067	ug/L	U	0.067	0.2	0.2	1	MS	BAJ	01/29/18 22:24	180129−3	1734013
7440−62−2	Vanadium	1	ug/L	U	1	5	5	1	P	HSC	02/06/18 21:06	020618A−1	1734007
7440−66−6	Zinc	3.3	ug/L	U	3.3	10	10	1	MS	BAJ	01/30/18 16:39	180130−4	1734013

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
1734007	1734005	SW846 3005A	50	mL	50	mL	01/25/18	JXM8
1734013	1734012	SW846 3005A	50	mL	50	mL	01/25/18	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: GEL442240 **CONTRACT:** CPRC0S18001 **METHOD TYPE:** SW846

SAMPLE ID: 442240008 **BASIS:** As Received **DATE COLLECTED** 23−JAN−18

CLIENT ID: B3FX43 **LEVEL:** Low **DATE RECEIVED** 24−JAN−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	01/29/18 22:27	180129−3	1734013
7440−36−0	Antimony	1	ug/L	U	1	3	3	1	MS	BAJ	01/30/18 16:40	180130−4	1734013
7440−38−2	Arsenic	2	ug/L	U	2	5	5	1	MS	BAJ	01/29/18 22:27	180129−3	1734013
7440−39−3	Barium	0.670	ug/L	U	0.67	2	2	1	MS	BAJ	01/29/18 22:27	180129−3	1734013
7440−41−7	Beryllium	0.20	ug/L	U	0.2	0.5	0.5	1	MS	BAJ	01/29/18 22:27	180129−3	1734013
7440−42−8	Boron	15	ug/L	U	15	50	50	1	P	HSC	02/06/18 21:09	020618A−1	1734007
7440−43−9	Cadmium	0.30	ug/L	U	0.3	1	1	1	MS	BAJ	01/29/18 22:27	180129−3	1734013
7440−70−2	Calcium	50	ug/L	U	50	200	200	1	P	HSC	02/06/18 21:09	020618A−1	1734007
7440−47−3	Chromium	3	ug/L	U	3	10	10	1	MS	BAJ	01/29/18 22:27	180129−3	1734013
7440−48−4	Cobalt	0.30	ug/L	U	0.3	1	1	1	MS	BAJ	01/29/18 22:27	180129−3	1734013
7440−50−8	Copper	0.30	ug/L	U	0.3	1	1	1	MS	BAJ	01/29/18 22:27	180129−3	1734013
7439−89−6	Iron	30	ug/L	U	30	100	100	1	P	HSC	02/06/18 21:09	020618A−1	1734007
7439−92−1	Lead	0.50	ug/L	U	0.5	2	2	1	MS	BAJ	01/29/18 22:27	180129−3	1734013
7439−95−4	Magnesium	110	ug/L	U	110	300	300	1	P	HSC	02/06/18 21:09	020618A−1	1734007
7439−96−5	Manganese	1	ug/L	U	1	5	5	1	MS	BAJ	01/29/18 22:27	180129−3	1734013
7439−98−7	Molybdenum	0.20	ug/L	U	0.2	0.5	0.5	1	MS	BAJ	01/29/18 22:27	180129−3	1734013
7440−02−0	Nickel	0.60	ug/L	U	0.6	2	2	1	MS	BAJ	01/29/18 22:27	180129−3	1734013
7440−09−7	Potassium	50	ug/L	U	50	150	150	1	P	HSC	02/06/18 21:09	020618A−1	1734007
7782−49−2	Selenium	2	ug/L	U	2	5	5	1	MS	BAJ	01/29/18 22:27	180129−3	1734013
7440−22−4	Silver	0.30	ug/L	U	0.3	1	1	1	MS	BAJ	01/29/18 22:27	180129−3	1734013
7440−23−5	Sodium	100	ug/L	U	100	300	300	1	P	TXT1	02/20/18 13:39	022018−2	1734007
7440−24−6	Strontium	2	ug/L	U	2	10	10	1	MS	BAJ	01/29/18 22:27	180129−3	1734013
7440−28−0	Thallium	0.60	ug/L	U	0.6	2	2	1	MS	BAJ	01/29/18 22:27	180129−3	1734013
7440−29−1	Thorium	0.70	ug/L	U	0.7	2	2	1	MS	BAJ	01/29/18 22:27	180129−3	1734013
7440−31−5	Tin	1	ug/L	U	1	5	5	1	MS	BAJ	01/29/18 22:27	180129−3	1734013
7440−61−1	Uranium	0.067	ug/L	U	0.067	0.2	0.2	1	MS	BAJ	01/29/18 22:27	180129−3	1734013
7440−62−2	Vanadium	1	ug/L	U	1	5	5	1	P	HSC	02/06/18 21:09	020618A−1	1734007
7440−66−6	Zinc	3.3	ug/L	U	3.3	10	10	1	MS	BAJ	01/30/18 16:40	180130−4	1734013

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
1734007	1734005	SW846 3005A	50	mL	50	mL	01/25/18	JXM8
1734013	1734012	SW846 3005A	50	mL	50	mL	01/25/18	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: GEL442240 **CONTRACT:** CPRC0S18001 **METHOD TYPE:** SW846

SAMPLE ID: 442240009 **BASIS:** As Received **DATE COLLECTED** 23−JAN−18

CLIENT ID: B3FX44 **LEVEL:** Low **DATE RECEIVED** 24−JAN−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	01/29/18 22:30	180129−3	1734013
7440−36−0	Antimony	1	ug/L	U	1	3	3	1	MS	BAJ	01/30/18 16:42	180130−4	1734013
7440−38−2	Arsenic	5.45	ug/L		2	5	5	1	MS	BAJ	01/29/18 22:30	180129−3	1734013
7440−39−3	Barium	39.9	ug/L		0.67	2	2	1	MS	BAJ	01/29/18 22:30	180129−3	1734013
7440−41−7	Beryllium	0.20	ug/L	U	0.2	0.5	0.5	1	MS	BAJ	01/29/18 22:30	180129−3	1734013
7440−42−8	Boron	15	ug/L	U	15	50	50	1	P	HSC	02/06/18 21:12	020618A−1	1734007
7440−43−9	Cadmium	0.30	ug/L	U	0.3	1	1	1	MS	BAJ	01/29/18 22:30	180129−3	1734013
7440−70−2	Calcium	64800	ug/L		50	200	200	1	P	HSC	02/06/18 21:12	020618A−1	1734007
7440−47−3	Chromium	3	ug/L	U	3	10	10	1	MS	BAJ	01/29/18 22:30	180129−3	1734013
7440−48−4	Cobalt	0.30	ug/L	U	0.3	1	1	1	MS	BAJ	01/29/18 22:30	180129−3	1734013
7440−50−8	Copper	0.30	ug/L	U	0.3	1	1	1	MS	BAJ	01/29/18 22:30	180129−3	1734013
7439−89−6	Iron	30	ug/L	U	30	100	100	1	P	HSC	02/06/18 21:12	020618A−1	1734007
7439−92−1	Lead	0.50	ug/L	U	0.5	2	2	1	MS	BAJ	01/29/18 22:30	180129−3	1734013
7439−95−4	Magnesium	16700	ug/L		110	300	300	1	P	HSC	02/06/18 21:12	020618A−1	1734007
7439−96−5	Manganese	2.26	ug/L	B	1	5	5	1	MS	BAJ	01/29/18 22:30	180129−3	1734013
7439−98−7	Molybdenum	2.78	ug/L		0.2	0.5	0.5	1	MS	BAJ	01/29/18 22:30	180129−3	1734013
7440−02−0	Nickel	1.3	ug/L	B	0.6	2	2	1	MS	BAJ	01/29/18 22:30	180129−3	1734013
7440−09−7	Potassium	7470	ug/L		50	150	150	1	P	HSC	02/06/18 21:12	020618A−1	1734007
7782−49−2	Selenium	6.92	ug/L		2	5	5	1	MS	BAJ	01/29/18 22:30	180129−3	1734013
7440−22−4	Silver	0.30	ug/L	U	0.3	1	1	1	MS	BAJ	01/29/18 22:30	180129−3	1734013
7440−23−5	Sodium	15700	ug/L		100	300	300	1	P	TXT1	02/20/18 13:47	022018−2	1734007
7440−24−6	Strontium	363	ug/L		2	10	10	1	MS	BAJ	01/29/18 22:30	180129−3	1734013
7440−28−0	Thallium	0.60	ug/L	U	0.6	2	2	1	MS	BAJ	01/29/18 22:30	180129−3	1734013
7440−29−1	Thorium	0.70	ug/L	U	0.7	2	2	1	MS	BAJ	01/29/18 22:30	180129−3	1734013
7440−31−5	Tin	1	ug/L	U	1	5	5	1	MS	BAJ	01/29/18 22:30	180129−3	1734013
7440−61−1	Uranium	3.29	ug/L		0.067	0.2	0.2	1	MS	BAJ	01/29/18 22:30	180129−3	1734013
7440−62−2	Vanadium	20.4	ug/L		1	5	5	1	P	HSC	02/06/18 21:12	020618A−1	1734007
7440−66−6	Zinc	3.3	ug/L	U	3.3	10	10	1	MS	BAJ	01/30/18 16:42	180130−4	1734013

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
1734007	1734005	SW846 3005A	50	mL	50	mL	01/25/18	JXM8
1734013	1734012	SW846 3005A	50	mL	50	mL	01/25/18	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: GEL442240 **CONTRACT:** CPRC0S18001 **METHOD TYPE:** SW846

SAMPLE ID: 442240010 **BASIS:** As Received **DATE COLLECTED** 23−JAN−18

CLIENT ID: B3FX40 **LEVEL:** Low **DATE RECEIVED** 24−JAN−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	01/29/18 22:40	180129−3	1734013
7440−36−0	Antimony	1	ug/L	U	1	3	3	1	MS	BAJ	01/30/18 16:47	180130−4	1734013
7440−38−2	Arsenic	6.08	ug/L		2	5	5	1	MS	BAJ	01/29/18 22:40	180129−3	1734013
7440−39−3	Barium	40.6	ug/L		0.67	2	2	1	MS	BAJ	01/29/18 22:40	180129−3	1734013
7440−41−7	Beryllium	0.20	ug/L	U	0.2	0.5	0.5	1	MS	BAJ	01/29/18 22:40	180129−3	1734013
7440−42−8	Boron	15	ug/L	U	15	50	50	1	P	HSC	02/06/18 21:15	020618A−1	1734007
7440−43−9	Cadmium	0.30	ug/L	U	0.3	1	1	1	MS	BAJ	01/29/18 22:40	180129−3	1734013
7440−70−2	Calcium	66000	ug/L		50	200	200	1	P	HSC	02/06/18 21:15	020618A−1	1734007
7440−47−3	Chromium	3.83	ug/L	B	3	10	10	1	MS	BAJ	01/29/18 22:40	180129−3	1734013
7440−48−4	Cobalt	0.30	ug/L	U	0.3	1	1	1	MS	BAJ	01/29/18 22:40	180129−3	1734013
7440−50−8	Copper	0.520	ug/L	B	0.3	1	1	1	MS	BAJ	01/29/18 22:40	180129−3	1734013
7439−89−6	Iron	186	ug/L		30	100	100	1	P	HSC	02/06/18 21:15	020618A−1	1734007
7439−92−1	Lead	0.50	ug/L	U	0.5	2	2	1	MS	BAJ	01/29/18 22:40	180129−3	1734013
7439−95−4	Magnesium	17000	ug/L		110	300	300	1	P	HSC	02/06/18 21:15	020618A−1	1734007
7439−96−5	Manganese	13.7	ug/L		1	5	5	1	MS	BAJ	01/29/18 22:40	180129−3	1734013
7439−98−7	Molybdenum	2.38	ug/L		0.2	0.5	0.5	1	MS	BAJ	01/29/18 22:40	180129−3	1734013
7440−02−0	Nickel	1.8	ug/L	B	0.6	2	2	1	MS	BAJ	01/29/18 22:40	180129−3	1734013
7440−09−7	Potassium	7570	ug/L		50	150	150	1	P	HSC	02/06/18 21:15	020618A−1	1734007
7782−49−2	Selenium	6.99	ug/L		2	5	5	1	MS	BAJ	01/29/18 22:40	180129−3	1734013
7440−22−4	Silver	0.30	ug/L	U	0.3	1	1	1	MS	BAJ	01/29/18 22:40	180129−3	1734013
7440−23−5	Sodium	15800	ug/L		100	300	300	1	P	TXT1	02/20/18 13:50	022018−2	1734007
7440−24−6	Strontium	351	ug/L		2	10	10	1	MS	BAJ	01/29/18 22:40	180129−3	1734013
7440−28−0	Thallium	0.60	ug/L	U	0.6	2	2	1	MS	BAJ	01/29/18 22:40	180129−3	1734013
7440−29−1	Thorium	0.70	ug/L	U	0.7	2	2	1	MS	BAJ	01/29/18 22:40	180129−3	1734013
7440−31−5	Tin	1	ug/L	U	1	5	5	1	MS	BAJ	01/29/18 22:40	180129−3	1734013
7440−61−1	Uranium	3.23	ug/L		0.067	0.2	0.2	1	MS	BAJ	01/29/18 22:40	180129−3	1734013
7440−62−2	Vanadium	22	ug/L		1	5	5	1	P	HSC	02/06/18 21:15	020618A−1	1734007
7440−66−6	Zinc	3.3	ug/L	U	3.3	10	10	1	MS	BAJ	01/30/18 16:47	180130−4	1734013

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
1734007	1734005	SW846 3005A	50	mL	50	mL	01/25/18	JXM8
1734013	1734012	SW846 3005A	50	mL	50	mL	01/25/18	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: GEL442240 **CONTRACT:** CPRC0S18001 **METHOD TYPE:** SW846

SAMPLE ID: 442240013 **BASIS:** As Received **DATE COLLECTED** 23−JAN−18

CLIENT ID: B3FW81 **LEVEL:** Low **DATE RECEIVED** 25−JAN−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	22.3	ug/L	B	19.3	50	50	1	MS	BAJ	01/29/18 22:44	180129−3	1734013
7440−36−0	Antimony	1	ug/L	U	1	3	3	1	MS	BAJ	01/30/18 16:48	180130−4	1734013
7440−38−2	Arsenic	2.16	ug/L	B	2	5	5	1	MS	BAJ	01/29/18 22:44	180129−3	1734013
7440−39−3	Barium	16	ug/L		0.67	2	2	1	MS	BAJ	01/29/18 22:44	180129−3	1734013
7440−41−7	Beryllium	0.20	ug/L	U	0.2	0.5	0.5	1	MS	BAJ	01/29/18 22:44	180129−3	1734013
7440−42−8	Boron	15	ug/L	U	15	50	50	1	P	HSC	02/06/18 21:18	020618A−1	1734007
7440−43−9	Cadmium	0.30	ug/L	U	0.3	1	1	1	MS	BAJ	01/29/18 22:44	180129−3	1734013
7440−70−2	Calcium	11200	ug/L		50	200	200	1	P	HSC	02/06/18 21:18	020618A−1	1734007
7440−47−3	Chromium	28.5	ug/L		3	10	10	1	MS	BAJ	01/29/18 22:44	180129−3	1734013
7440−48−4	Cobalt	0.373	ug/L	B	0.3	1	1	1	MS	BAJ	01/29/18 22:44	180129−3	1734013
7440−50−8	Copper	0.989	ug/L	B	0.3	1	1	1	MS	BAJ	01/29/18 22:44	180129−3	1734013
7439−89−6	Iron	285	ug/L		30	100	100	1	P	HSC	02/06/18 21:18	020618A−1	1734007
7439−92−1	Lead	0.50	ug/L	U	0.5	2	2	1	MS	BAJ	01/29/18 22:44	180129−3	1734013
7439−95−4	Magnesium	10200	ug/L		110	300	300	1	P	HSC	02/06/18 21:18	020618A−1	1734007
7439−96−5	Manganese	14.3	ug/L		1	5	5	1	MS	BAJ	01/29/18 22:44	180129−3	1734013
7439−98−7	Molybdenum	6.38	ug/L		0.2	0.5	0.5	1	MS	BAJ	01/29/18 22:44	180129−3	1734013
7440−02−0	Nickel	16.1	ug/L		0.6	2	2	1	MS	BAJ	01/29/18 22:44	180129−3	1734013
7440−09−7	Potassium	4010	ug/L		50	150	150	1	P	HSC	02/06/18 21:18	020618A−1	1734007
7782−49−2	Selenium	2	ug/L	U	2	5	5	1	MS	BAJ	01/29/18 22:44	180129−3	1734013
7440−22−4	Silver	0.30	ug/L	U	0.3	1	1	1	MS	BAJ	01/29/18 22:44	180129−3	1734013
7440−23−5	Sodium	13900	ug/L		100	300	300	1	P	TXT1	02/20/18 13:53	022018−2	1734007
7440−24−6	Strontium	217	ug/L		2	10	10	1	MS	BAJ	01/29/18 22:44	180129−3	1734013
7440−28−0	Thallium	0.60	ug/L	U	0.6	2	2	1	MS	BAJ	01/29/18 22:44	180129−3	1734013
7440−29−1	Thorium	0.70	ug/L	U	0.7	2	2	1	MS	BAJ	01/29/18 22:44	180129−3	1734013
7440−31−5	Tin	1	ug/L	U	1	5	5	1	MS	BAJ	01/29/18 22:44	180129−3	1734013
7440−61−1	Uranium	2.19	ug/L		0.067	0.2	0.2	1	MS	BAJ	01/29/18 22:44	180129−3	1734013
7440−62−2	Vanadium	4.17	ug/L	B	1	5	5	1	P	HSC	02/06/18 21:18	020618A−1	1734007
7440−66−6	Zinc	6.35	ug/L	B	3.3	10	10	1	MS	BAJ	01/30/18 16:48	180130−4	1734013

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
1734007	1734005	SW846 3005A	50	mL	50	mL	01/25/18	JXM8
1734013	1734012	SW846 3005A	50	mL	50	mL	01/25/18	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: GEL442240 **CONTRACT:** CPRC0S18001 **METHOD TYPE:** SW846

SAMPLE ID: 442240014 **BASIS:** As Received **DATE COLLECTED** 23−JAN−18

CLIENT ID: B3FW85 **LEVEL:** Low **DATE RECEIVED** 25−JAN−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	01/29/18 22:47	180129−3	1734013
7440−36−0	Antimony	1	ug/L	U	1	3	3	1	MS	BAJ	01/30/18 16:50	180130−4	1734013
7440−38−2	Arsenic	2.17	ug/L	B	2	5	5	1	MS	BAJ	01/29/18 22:47	180129−3	1734013
7440−39−3	Barium	14.8	ug/L		0.67	2	2	1	MS	BAJ	01/29/18 22:47	180129−3	1734013
7440−41−7	Beryllium	0.20	ug/L	U	0.2	0.5	0.5	1	MS	BAJ	01/29/18 22:47	180129−3	1734013
7440−42−8	Boron	15	ug/L	U	15	50	50	1	P	HSC	02/06/18 21:21	020618A−1	1734007
7440−43−9	Cadmium	0.30	ug/L	U	0.3	1	1	1	MS	BAJ	01/29/18 22:47	180129−3	1734013
7440−70−2	Calcium	11600	ug/L		50	200	200	1	P	HSC	02/06/18 21:21	020618A−1	1734007
7440−47−3	Chromium	11.9	ug/L		3	10	10	1	MS	BAJ	01/29/18 22:47	180129−3	1734013
7440−48−4	Cobalt	0.30	ug/L	U	0.3	1	1	1	MS	BAJ	01/29/18 22:47	180129−3	1734013
7440−50−8	Copper	0.410	ug/L	B	0.3	1	1	1	MS	BAJ	01/29/18 22:47	180129−3	1734013
7439−89−6	Iron	69.9	ug/L	B	30	100	100	1	P	HSC	02/06/18 21:21	020618A−1	1734007
7439−92−1	Lead	0.50	ug/L	U	0.5	2	2	1	MS	BAJ	01/29/18 22:47	180129−3	1734013
7439−95−4	Magnesium	10600	ug/L		110	300	300	1	P	HSC	02/06/18 21:21	020618A−1	1734007
7439−96−5	Manganese	3.01	ug/L	B	1	5	5	1	MS	BAJ	01/29/18 22:47	180129−3	1734013
7439−98−7	Molybdenum	6.6	ug/L		0.2	0.5	0.5	1	MS	BAJ	01/29/18 22:47	180129−3	1734013
7440−02−0	Nickel	6.86	ug/L		0.6	2	2	1	MS	BAJ	01/29/18 22:47	180129−3	1734013
7440−09−7	Potassium	4190	ug/L		50	150	150	1	P	HSC	02/06/18 21:21	020618A−1	1734007
7782−49−2	Selenium	2	ug/L	U	2	5	5	1	MS	BAJ	01/29/18 22:47	180129−3	1734013
7440−22−4	Silver	0.30	ug/L	U	0.3	1	1	1	MS	BAJ	01/29/18 22:47	180129−3	1734013
7440−23−5	Sodium	14600	ug/L		100	300	300	1	P	TXT1	02/20/18 13:56	022018−2	1734007
7440−24−6	Strontium	205	ug/L		2	10	10	1	MS	BAJ	01/29/18 22:47	180129−3	1734013
7440−28−0	Thallium	0.60	ug/L	U	0.6	2	2	1	MS	BAJ	01/29/18 22:47	180129−3	1734013
7440−29−1	Thorium	0.70	ug/L	U	0.7	2	2	1	MS	BAJ	01/29/18 22:47	180129−3	1734013
7440−31−5	Tin	1	ug/L	U	1	5	5	1	MS	BAJ	01/29/18 22:47	180129−3	1734013
7440−61−1	Uranium	2.11	ug/L		0.067	0.2	0.2	1	MS	BAJ	01/29/18 22:47	180129−3	1734013
7440−62−2	Vanadium	3.62	ug/L	B	1	5	5	1	P	HSC	02/06/18 21:21	020618A−1	1734007
7440−66−6	Zinc	3.3	ug/L	U	3.3	10	10	1	MS	BAJ	01/30/18 16:50	180130−4	1734013

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
1734007	1734005	SW846 3005A	50	mL	50	mL	01/25/18	JXM8
1734013	1734012	SW846 3005A	50	mL	50	mL	01/25/18	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: GEL442240 **CONTRACT:** CPRC0S18001 **METHOD TYPE:** SW846

SAMPLE ID: 442240015 **BASIS:** As Received **DATE COLLECTED** 23−JAN−18

CLIENT ID: B3FW82 **LEVEL:** Low **DATE RECEIVED** 25−JAN−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	26.4	ug/L	B	19.3	50	50	1	MS	BAJ	01/29/18 22:50	180129−3	1734013
7440−36−0	Antimony	1	ug/L	U	1	3	3	1	MS	BAJ	01/30/18 16:52	180130−4	1734013
7440−38−2	Arsenic	2.26	ug/L	B	2	5	5	1	MS	BAJ	01/29/18 22:50	180129−3	1734013
7440−39−3	Barium	16.7	ug/L		0.67	2	2	1	MS	BAJ	01/29/18 22:50	180129−3	1734013
7440−41−7	Beryllium	0.20	ug/L	U	0.2	0.5	0.5	1	MS	BAJ	01/29/18 22:50	180129−3	1734013
7440−42−8	Boron	15	ug/L	U	15	50	50	1	P	HSC	02/06/18 21:24	020618A−1	1734007
7440−43−9	Cadmium	0.30	ug/L	U	0.3	1	1	1	MS	BAJ	01/29/18 22:50	180129−3	1734013
7440−70−2	Calcium	11200	ug/L		50	200	200	1	P	HSC	02/06/18 21:24	020618A−1	1734007
7440−47−3	Chromium	32.8	ug/L		3	10	10	1	MS	BAJ	01/29/18 22:50	180129−3	1734013
7440−48−4	Cobalt	0.373	ug/L	B	0.3	1	1	1	MS	BAJ	01/29/18 22:50	180129−3	1734013
7440−50−8	Copper	1.15	ug/L		0.3	1	1	1	MS	BAJ	01/29/18 22:50	180129−3	1734013
7439−89−6	Iron	307	ug/L		30	100	100	1	P	HSC	02/06/18 21:24	020618A−1	1734007
7439−92−1	Lead	0.50	ug/L	U	0.5	2	2	1	MS	BAJ	01/29/18 22:50	180129−3	1734013
7439−95−4	Magnesium	10300	ug/L		110	300	300	1	P	HSC	02/06/18 21:24	020618A−1	1734007
7439−96−5	Manganese	13.5	ug/L		1	5	5	1	MS	BAJ	01/29/18 22:50	180129−3	1734013
7439−98−7	Molybdenum	6.55	ug/L		0.2	0.5	0.5	1	MS	BAJ	01/29/18 22:50	180129−3	1734013
7440−02−0	Nickel	17.2	ug/L		0.6	2	2	1	MS	BAJ	01/29/18 22:50	180129−3	1734013
7440−09−7	Potassium	3970	ug/L		50	150	150	1	P	HSC	02/06/18 21:24	020618A−1	1734007
7782−49−2	Selenium	2	ug/L	U	2	5	5	1	MS	BAJ	01/29/18 22:50	180129−3	1734013
7440−22−4	Silver	0.30	ug/L	U	0.3	1	1	1	MS	BAJ	01/29/18 22:50	180129−3	1734013
7440−23−5	Sodium	14100	ug/L		100	300	300	1	P	TXT1	02/20/18 13:59	022018−2	1734007
7440−24−6	Strontium	209	ug/L		2	10	10	1	MS	BAJ	01/29/18 22:50	180129−3	1734013
7440−28−0	Thallium	0.60	ug/L	U	0.6	2	2	1	MS	BAJ	01/29/18 22:50	180129−3	1734013
7440−29−1	Thorium	0.70	ug/L	U	0.7	2	2	1	MS	BAJ	01/29/18 22:50	180129−3	1734013
7440−31−5	Tin	1	ug/L	U	1	5	5	1	MS	BAJ	01/29/18 22:50	180129−3	1734013
7440−61−1	Uranium	2.24	ug/L		0.067	0.2	0.2	1	MS	BAJ	01/29/18 22:50	180129−3	1734013
7440−62−2	Vanadium	4.08	ug/L	B	1	5	5	1	P	HSC	02/06/18 21:24	020618A−1	1734007
7440−66−6	Zinc	3.3	ug/L	U	3.3	10	10	1	MS	BAJ	01/30/18 16:52	180130−4	1734013

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
1734007	1734005	SW846 3005A	50	mL	50	mL	01/25/18	JXM8
1734013	1734012	SW846 3005A	50	mL	50	mL	01/25/18	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: GEL442240 **CONTRACT:** CPRC0S18001 **METHOD TYPE:** SW846

SAMPLE ID: 442240016 **BASIS:** As Received **DATE COLLECTED** 23−JAN−18

CLIENT ID: B3FW86 **LEVEL:** Low **DATE RECEIVED** 25−JAN−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	01/29/18 22:53	180129−3	1734013
7440−36−0	Antimony	1	ug/L	U	1	3	3	1	MS	BAJ	01/30/18 16:53	180130−4	1734013
7440−38−2	Arsenic	2.07	ug/L	B	2	5	5	1	MS	BAJ	01/29/18 22:53	180129−3	1734013
7440−39−3	Barium	14.7	ug/L		0.67	2	2	1	MS	BAJ	01/29/18 22:53	180129−3	1734013
7440−41−7	Beryllium	0.20	ug/L	U	0.2	0.5	0.5	1	MS	BAJ	01/29/18 22:53	180129−3	1734013
7440−42−8	Boron	15	ug/L	U	15	50	50	1	P	HSC	02/06/18 21:27	020618A−1	1734007
7440−43−9	Cadmium	0.30	ug/L	U	0.3	1	1	1	MS	BAJ	01/29/18 22:53	180129−3	1734013
7440−70−2	Calcium	11200	ug/L		50	200	200	1	P	HSC	02/06/18 21:27	020618A−1	1734007
7440−47−3	Chromium	12.7	ug/L		3	10	10	1	MS	BAJ	01/29/18 22:53	180129−3	1734013
7440−48−4	Cobalt	0.30	ug/L	U	0.3	1	1	1	MS	BAJ	01/29/18 22:53	180129−3	1734013
7440−50−8	Copper	0.381	ug/L	B	0.3	1	1	1	MS	BAJ	01/29/18 22:53	180129−3	1734013
7439−89−6	Iron	62.7	ug/L	B	30	100	100	1	P	HSC	02/06/18 21:27	020618A−1	1734007
7439−92−1	Lead	0.50	ug/L	U	0.5	2	2	1	MS	BAJ	01/29/18 22:53	180129−3	1734013
7439−95−4	Magnesium	10200	ug/L		110	300	300	1	P	HSC	02/06/18 21:27	020618A−1	1734007
7439−96−5	Manganese	3.05	ug/L	B	1	5	5	1	MS	BAJ	01/29/18 22:53	180129−3	1734013
7439−98−7	Molybdenum	6.6	ug/L		0.2	0.5	0.5	1	MS	BAJ	01/29/18 22:53	180129−3	1734013
7440−02−0	Nickel	6.76	ug/L		0.6	2	2	1	MS	BAJ	01/29/18 22:53	180129−3	1734013
7440−09−7	Potassium	4010	ug/L		50	150	150	1	P	HSC	02/06/18 21:27	020618A−1	1734007
7782−49−2	Selenium	2	ug/L	U	2	5	5	1	MS	BAJ	01/29/18 22:53	180129−3	1734013
7440−22−4	Silver	0.30	ug/L	U	0.3	1	1	1	MS	BAJ	01/29/18 22:53	180129−3	1734013
7440−23−5	Sodium	13800	ug/L		100	300	300	1	P	TXT1	02/20/18 14:02	022018−2	1734007
7440−24−6	Strontium	210	ug/L		2	10	10	1	MS	BAJ	01/29/18 22:53	180129−3	1734013
7440−28−0	Thallium	0.60	ug/L	U	0.6	2	2	1	MS	BAJ	01/29/18 22:53	180129−3	1734013
7440−29−1	Thorium	0.70	ug/L	U	0.7	2	2	1	MS	BAJ	01/29/18 22:53	180129−3	1734013
7440−31−5	Tin	1	ug/L	U	1	5	5	1	MS	BAJ	01/29/18 22:53	180129−3	1734013
7440−61−1	Uranium	2.12	ug/L		0.067	0.2	0.2	1	MS	BAJ	01/29/18 22:53	180129−3	1734013
7440−62−2	Vanadium	3.87	ug/L	B	1	5	5	1	P	HSC	02/06/18 21:27	020618A−1	1734007
7440−66−6	Zinc	3.3	ug/L	U	3.3	10	10	1	MS	BAJ	01/30/18 16:53	180130−4	1734013

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
1734007	1734005	SW846 3005A	50	mL	50	mL	01/25/18	JXM8
1734013	1734012	SW846 3005A	50	mL	50	mL	01/25/18	JXM8

***Analytical Methods:**

METALS
−1−
INORGANICS ANALYSIS DATA PACKAGE

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: February 21, 2018

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

Contact: **Mr. Scot Fitzgerald**

Workorder: **442240**

Parmname	NOM	Sample	Qual	QC	Units	RPD/D%	REC%	Range	Anlst	Date Time
Metals Analysis - ICPMS										
Batch 1734013										
QC1203958311 LCS										
Aluminum	2000			1920	ug/L		96.2	(80%-120%)	BAJ	01/29/18 21:40
Antimony	50.0			46.0	ug/L		92.1	(80%-120%)		01/30/18 16:18
Arsenic	50.0			50.4	ug/L		101	(80%-120%)		01/29/18 21:40
Barium	50.0			47.8	ug/L		95.6	(80%-120%)		
Beryllium	50.0			57.3	ug/L		115	(80%-120%)		
Cadmium	50.0			50.2	ug/L		100	(80%-120%)		
Chromium	50.0			50.2	ug/L		100	(80%-120%)		
Cobalt	50.0			49.8	ug/L		99.6	(80%-120%)		
Copper	50.0			49.8	ug/L		99.6	(80%-120%)		
Lead	50.0			49.2	ug/L		98.5	(80%-120%)		
Manganese	50.0			50.9	ug/L		102	(80%-120%)		
Molybdenum	50.0			52.0	ug/L		104	(80%-120%)		
Nickel	50.0			51.5	ug/L		103	(80%-120%)		

GEL LABORATORIES LLC
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QC Summary

Workorder: **442240**

Parmname	NOM	Sample	Qual	QC	Units	RPD/D%	REC%	Range	Anlst	Date Time
Metals Analysis - ICPMS										
Batch 1734013										
Selenium	50.0			51.6	ug/L		103	(80%-120%)	BAJ	01/29/18 21:40
Silver	50.0			53.8	ug/L		108	(80%-120%)		
Strontium	50.0			51.3	ug/L		103	(80%-120%)		
Thallium	50.0			45.8	ug/L		91.7	(80%-120%)		
Thorium	50.0			47.7	ug/L		95.5	(80%-120%)		
Tin	50.0			50.2	ug/L		100	(80%-120%)		
Uranium	50.0			48.1	ug/L		96.1	(80%-120%)		
Zinc	50.0			49.1	ug/L		98.1	(80%-120%)		01/30/18 16:18
QC1203958310 MB										
Aluminum			U	19.3	ug/L					01/29/18 21:37
Antimony			U	1.00	ug/L					01/30/18 16:16
Arsenic			U	2.00	ug/L					01/29/18 21:37
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: **442240**

Parmname	NOM	Sample	Qual	QC	Units	RPD/D%	REC%	Range	Anlst	Date Time
Metals Analysis - ICPMS										
Batch 1734013										
Cobalt			U	0.300	ug/L				BAJ	01/29/18 21:37
Copper			U	0.300	ug/L					
Lead			U	0.500	ug/L					
Manganese			U	1.00	ug/L					
Molybdenum			U	0.200	ug/L					
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			U	1.00	ug/L					
Uranium			U	0.067	ug/L					
Zinc			U	3.30	ug/L					01/30/18 16:16
QC1203958312 442240001 MS										
Aluminum	2000	U	19.3	1840	ug/L		91.9	(75%-125%)		01/29/18 21:47

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QC Summary

Workorder: **442240**

Parmname	NOM		Sample	Qual	QC	Units	RPD/D%	REC%	Range	Anlst	Date Time
Metals Analysis - ICPMS											
Batch 1734013											
Antimony	50.0	U	1.00		46.6	ug/L		92.5	(75%-125%)	BAJ	01/30/18 16:21
Arsenic	50.0		5.94		55.9	ug/L		100	(75%-125%)		01/29/18 21:47
Barium	50.0		57.9		102	ug/L		89	(75%-125%)		
Beryllium	50.0	U	0.200		55.5	ug/L		111	(75%-125%)		
Cadmium	50.0	U	0.300		49.6	ug/L		99.1	(75%-125%)		
Chromium	50.0	B	3.40		53.1	ug/L		99.4	(75%-125%)		
Cobalt	50.0	U	0.300		47.5	ug/L		94.5	(75%-125%)		
Copper	50.0	B	0.373		47.2	ug/L		93.7	(75%-125%)		
Lead	50.0	U	0.500		45.8	ug/L		91.6	(75%-125%)		
Manganese	50.0	B	1.01		48.6	ug/L		95.2	(75%-125%)		
Molybdenum	50.0		6.28		58.9	ug/L		105	(75%-125%)		
Nickel	50.0		3.23		50.1	ug/L		93.6	(75%-125%)		
Selenium	50.0		6.16		57.4	ug/L		102	(75%-125%)		
Silver	50.0	U	0.300		49.8	ug/L		99.4	(75%-125%)		
Strontium	50.0		334		384	ug/L		N/A	(75%-125%)		

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

QC Summary

Workorder: **442240**

Parmname	NOM		Sample	Qual	QC	Units	RPD/D%	REC%	Range	Anlst	Date Time
Metals Analysis - ICPMS											
Batch 1734013											
Thallium	50.0	U	0.600		43.1	ug/L		86.2	(75%-125%)	BAJ	01/29/18 21:47
Thorium	50.0	U	0.700		46.8	ug/L		93.1	(75%-125%)		
Tin	50.0	U	1.00		49.4	ug/L		98.6	(75%-125%)		
Uranium	50.0		10.8		57.7	ug/L		93.9	(75%-125%)		
Zinc	50.0	U	3.30		46.8	ug/L		90.9	(75%-125%)		01/30/18 16:21
QC1203958313 442240001 MSD											
Aluminum	2000	U	19.3		1920	ug/L	4.27	95.9	(0%-20%)		01/29/18 21:50
Antimony	50.0	U	1.00		46.3	ug/L	0.719	91.8	(0%-20%)		01/30/18 16:22
Arsenic	50.0		5.94		56.7	ug/L	1.42	102	(0%-20%)		01/29/18 21:50
Barium	50.0		57.9		107	ug/L	4.6	98.6	(0%-20%)		
Beryllium	50.0	U	0.200		56.7	ug/L	2.16	113	(0%-20%)		
Cadmium	50.0	U	0.300		50.3	ug/L	1.54	101	(0%-20%)		
Chromium	50.0	B	3.40		53.5	ug/L	0.797	100	(0%-20%)		
Cobalt	50.0	U	0.300		49.2	ug/L	3.51	97.9	(0%-20%)		
Copper	50.0	B	0.373		47.9	ug/L	1.44	95.1	(0%-20%)		
Lead	50.0	U	0.500		47.5	ug/L	3.57	94.9	(0%-20%)		

GEL LABORATORIES LLC
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QC Summary

Workorder: **442240**

Parmname	NOM		Sample	Qual	QC	Units	RPD/D%	REC%	Range	Anlst	Date Time
Metals Analysis - ICPMS											
Batch 1734013											
Manganese	50.0	B	1.01		49.5	ug/L	1.77	96.9	(0%-20%)	BAJ	01/29/18 21:50
Molybdenum	50.0		6.28		60.5	ug/L	2.76	108	(0%-20%)		
Nickel	50.0		3.23		51.4	ug/L	2.69	96.4	(0%-20%)		
Selenium	50.0		6.16		56.8	ug/L	0.961	101	(0%-20%)		
Silver	50.0	U	0.300		51.6	ug/L	3.69	103	(0%-20%)		
Strontium	50.0		334		399	ug/L	3.76	N/A	(0%-20%)		
Thallium	50.0	U	0.600		45.4	ug/L	5.09	90.7	(0%-20%)		
Thorium	50.0	U	0.700		49.0	ug/L	4.46	97.4	(0%-20%)		
Tin	50.0	U	1.00		51.7	ug/L	4.44	103	(0%-20%)		
Uranium	50.0		10.8		60.1	ug/L	4.01	98.6	(0%-20%)		
Zinc	50.0	U	3.30		48.4	ug/L	3.47	94.2	(0%-20%)		01/30/18 16:22
QC1203958314 442240001 SDILT											
Aluminum		U	3.56	DU	96.5	ug/L	N/A		(0%-20%)		01/29/18 21:57
Antimony		U	0.389	DU	5.00	ug/L	N/A		(0%-20%)		01/30/18 16:26
Arsenic			5.94	DU	10.0	ug/L	N/A		(0%-20%)		01/29/18 21:57
Barium			57.9	D	11.9	ug/L	2.47		(0%-20%)		

GEL LABORATORIES LLC
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QC Summary

Workorder: **442240**

Parmname	NOM	Sample	Qual	QC	Units	RPD/D%	REC%	Range	Anlst	Date Time
Metals Analysis - ICPMS										
Batch 1734013										
Beryllium	U	0.007	DU	1.00	ug/L	N/A		(0%-20%)	BAJ	01/29/18 21:57
Cadmium	U	0.001	DU	1.50	ug/L	N/A		(0%-20%)		
Chromium	B	3.40	DU	15.0	ug/L	N/A		(0%-20%)		
Cobalt	U	0.272	DU	1.50	ug/L	N/A		(0%-20%)		
Copper	B	0.373	DU	1.50	ug/L	N/A		(0%-20%)		
Lead	U	0.020	DU	2.50	ug/L	N/A		(0%-20%)		
Manganese	B	1.01	DU	5.00	ug/L	N/A		(0%-20%)		
Molybdenum		6.28	D	1.22	ug/L	2.9		(0%-20%)		
Nickel		3.23	BD	0.653	ug/L	.99		(0%-20%)		
Selenium		6.16	DU	10.0	ug/L	N/A		(0%-20%)		
Silver	U	0.029	DU	1.50	ug/L	N/A		(0%-20%)		
Strontium		334	D	63.0	ug/L	5.73		(0%-20%)		
Thallium	U	0.020	DU	3.00	ug/L	N/A		(0%-20%)		
Thorium	U	0.289	DU	3.50	ug/L	N/A		(0%-20%)		
Tin	U	0.145	DU	5.00	ug/L	N/A		(0%-20%)		

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QC Summary

Workorder: **442240**

Parmname	NOM		Sample	Qual	QC	Units	RPD/D%	REC%	Range	Anlst	Date Time
Metals Analysis - ICPMS											
Batch 1734013											
Uranium			10.8	D	2.15	ug/L	.38		(0%-20%)	BAJ	01/29/18 21:57
Zinc		U	1.35	BD	4.78	ug/L	N/A		(0%-20%)		01/30/18 16:26
Metals Analysis-ICP											
Batch 1734007											
QC1203958296 LCS											
Boron	500				469	ug/L		93.7	(80%-120%)	HSC	02/06/18 20:28
Calcium	5000				4840	ug/L		96.8	(80%-120%)		
Iron	5000				4530	ug/L		90.6	(80%-120%)		
Magnesium	5000				4900	ug/L		97.9	(80%-120%)		
Potassium	5000				4570	ug/L		91.5	(80%-120%)		
Sodium	5000				4690	ug/L		93.8	(80%-120%)	TXT1	02/20/18 13:04
Vanadium	500				460	ug/L		92	(80%-120%)	HSC	02/06/18 20:28
QC1203958295 MB											
Boron				U	15.0	ug/L					02/06/18 20:25
Calcium				U	50.0	ug/L					
Iron				U	30.0	ug/L					
Magnesium				U	110	ug/L					
Potassium				U	50.0	ug/L					

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QC Summary

Workorder: **442240**

Parmname	NOM		Sample	Qual	QC	Units	RPD/D%	REC%	Range	Anlst	Date Time
Metals Analysis-ICP											
Batch 1734007											
Sodium				U	100	ug/L				TXT1	02/20/18 13:01
Vanadium				U	1.00	ug/L				HSC	02/06/18 20:25
QC1203958297 442240001 MS											
Boron	500	B	42.1		541	ug/L		99.8	(75%-125%)		02/06/18 20:34
Calcium	5000		61700		68900	ug/L		N/A	(75%-125%)		
Iron	5000	U	30.0		4640	ug/L		92.5	(75%-125%)		
Magnesium	5000		18300		23900	ug/L		112	(75%-125%)		
Potassium	5000		7290		12600	ug/L		107	(75%-125%)		
Sodium	5000		24900		30700	ug/L		N/A	(75%-125%)	TXT1	02/20/18 13:09
Vanadium	500		18.2		498	ug/L		95.9	(75%-125%)	HSC	02/06/18 20:34
QC1203958298 442240001 MSD											
Boron	500	B	42.1		560	ug/L	3.46	104	(0%-20%)		02/06/18 20:37
Calcium	5000		61700		69500	ug/L	0.913	N/A	(0%-20%)		
Iron	5000	U	30.0		4770	ug/L	2.72	95	(0%-20%)		
Magnesium	5000		18300		24100	ug/L	0.993	116	(0%-20%)		
Potassium	5000		7290		13000	ug/L	2.75	114	(0%-20%)		
Sodium	5000		24900		31300	ug/L	1.94	N/A	(0%-20%)	TXT1	02/20/18 13:11

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QC Summary

Workorder: **442240**

Parmname	NOM		Sample	Qual	QC	Units	RPD/D%	REC%	Range	Anlst	Date Time
Metals Analysis-ICP											
Batch 1734007											
Vanadium	500		18.2		512	ug/L	2.92	98.9	(0%-20%)	HSC	02/06/18 20:37
QC1203958299 442240001 SDILT											
Boron		B	42.1	DU	75.0	ug/L	N/A		(0%-20%)		02/06/18 20:41
Calcium			61700	D	12700	ug/L	3.26		(0%-20%)		
Iron		U	15.4	DU	150	ug/L	N/A		(0%-20%)		
Magnesium			18300	D	3880	ug/L	6.12		(0%-20%)		
Potassium			7290	D	1480	ug/L	1.77		(0%-20%)		
Sodium			24900	D	4890	ug/L	1.81		(0%-20%)	TXT1	02/20/18 20:17
Vanadium			18.2	BD	3.70	ug/L	1.6		(0%-20%)	HSC	02/06/18 20:41

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

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QC Summary

Workorder: **442240**

Parmname	NOM	Sample	Qual	QC	Units	RPD/D%	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.

General Chem Analysis

Case Narrative

General Chemistry
Technical Case Narrative
CH2MHill Plateau Remediation Company (CPRC)
SDG #: GEL442240
Work Order #: 442240

Product: **Alkalinity**
Analytical Method: 2320_ALKALINITY
Analytical Procedure: GL-GC-E-033 REV# 13
Analytical Batch: 1734521

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

GEL Sample ID#	Client Sample Identification
442240005	B3FX35
1203959563	Laboratory Control Sample (LCS)
1203959566	442236001(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.

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Qualifier Definition Report
for

CPRC001 CH2MHill Plateau Remediation Company

Client SDG: GEL442240 GEL Work Order: 442240

The Qualifiers in this report are defined as follows:

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: Aubrey Kingsbury**

Date: 31 JAN 2018 **Title: Analyst I**

Sample Data Summary

GEL LABORATORIES LLC
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Certificate of Analysis

Report Date: January 31, 2018

Company :	CH2MHill Plateau Remediation Company
Address :	MSIN R3-50 CHPRC PO Box 1600 Richland, Washington 99352
Contact:	Mr. Scot Fitzgerald
Project:	CHPRC SAF S18-001

Client Sample ID:	B3FX35	Project:	CPRC0S18001
Sample ID:	442240005	Client ID:	CPRC001
Matrix:	WATER		
Collect Date:	23-JAN-18 09:45		
Receive Date:	24-JAN-18		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Titration and Ion Analysis												
2320_ALKALINITY: GW 01 "As Received"												
Alkalinity, Total as CaCO3		91400	1450	4000	ug/L			RXB5	01/27/18	1358	1734521	1
Bicarbonate alkalinity (CaCO3)		91400	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	2320_ALKALINITY	

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

Quality Control Summary

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

QC Summary

Report Date: January 31, 2018

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

Contact: **Mr. Scot Fitzgerald**

Workorder: **442240**

Parmname	NOM		Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Titration and Ion Analysis												
Batch 1734521												
QC1203959566 442236001 DUP												
Alkalinity, Total as CaCO3			133000		131000	ug/L	1.51		(0%-20%)	RXB5	01/27/18	13:49
Bicarbonate alkalinity (CaCO3)			133000		131000	ug/L	1.51		(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					
QC1203959563 LCS												
Alkalinity, Total as CaCO3	100000				107000	ug/L		107	(80%-120%)		01/27/18	13:19

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
- 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

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QC Summary

Workorder: **442240**

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

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.

Radiological Analysis

Case Narrative

Radiochemistry
Technical Case Narrative
CH2MHill Plateau Remediation Company (CPRC)
SDG #: GEL442240
Work Order #: 442240

Product: **I129LL_SEP_LEPS_GS: COMMON (low level)**
Analytical Method: DOE EML HASL-300,I-01 Modified
Analytical Procedure: GL-RAD-A-006 REV# 21
Analytical Batch: 1733809

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

GEL Sample ID#	Client Sample Identification
442240011	B3FW03
442240012	B3FW04
442240019	B3HD01
442240020	B3HD02
442240021	B3HD03
442240022	B3HD06
442240023	B3HD09
442240024	B3HD25
442240025	B3HD26
1203957837	Method Blank (MB)
1203957838	441685007(B3FWR5) Sample Duplicate (DUP)
1203957839	441685007(B3FWR5) Matrix Spike (MS)
1203957840	Laboratory Control Sample (LCS)

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.

Qualifier Information

Qualifier	Reason	Analyte	Sample	Client Sample
X	Results are considered a false positive due to no valid peak.	Iodine-129	442240024	B3HD25

Product: **GAMMA_GS:COMMON**
Analytical Method: 901.1_GAMMA_GS
Analytical Procedure: GL-RAD-A-013 REV# 27
Analytical Batch: 1734330

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

GEL Sample ID#	Client Sample Identification
442240011	B3FW03
442240012	B3FW04
1203959126	Method Blank (MB)
1203959127	442240011(B3FW03) Sample Duplicate (DUP)
1203959128	Laboratory Control Sample (LCS)

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

Recounts
Sample 1203959128 (LCS) was recounted due to low recovery. The recount is reported.

Product: **SRISO_SEP_PRECIP_GPC: COMMON**
Analytical Method: SRISO_SEP_PRECIP_GPC
Analytical Procedure: GL-RAD-A-004 REV# 19
Analytical Batch: 1735174

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

GEL Sample ID#	Client Sample Identification
442240011	B3FW03
442240012	B3FW04
442240019	B3HD01
442240020	B3HD02
442240021	B3HD03
442240022	B3HD06
1203961245	Method Blank (MB)
1203961246	442159005(B3HD07) Sample Duplicate (DUP)
1203961247	Laboratory Control Sample (LCS)

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

Recounts
Samples 1203961246 (B3HD07DUP) and 442240019 (B3HD01) were recounted due to results more negative

than the three sigma TPU. The second counts are reported. Sample 442240022 (B3HD06) was taken through additional clean-up steps and recounted due to a suspected false positive. The recount is reported.

Product: **9310_ALPHABETA_GPC: COMMON**
Analytical Method: 9310_ALPHABETA_GPC
Analytical Procedure: GL-RAD-A-001 REV# 19
Analytical Batch: 1735191

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

GEL Sample ID#	Client Sample Identification
442240011	B3FW03
442240012	B3FW04
442240019	B3HD01
442240020	B3HD02
442240021	B3HD03
442240022	B3HD06
442240023	B3HD09
442240024	B3HD25
442240025	B3HD26
1203961278	Method Blank (MB)
1203961279	442240023(B3HD09) Sample Duplicate (DUP)
1203961280	442240023(B3HD09) Matrix Spike (MS)
1203961281	442240023(B3HD09) Matrix Spike Duplicate (MSD)
1203961282	Laboratory Control Sample (LCS)

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

Gross Alpha/Beta Preparation Information
High hygroscopic salt content in evaporated samples can cause the sample mass to fluctuate due to moisture absorption. To minimize this interference, the salts are converted to oxides by heating the sample under a flame until a dull red color is obtained. The conversion to oxides stabilizes the sample weight and ensures that proper alpha/beta efficiencies are assigned for each sample. Volatile radioisotopes of carbon, hydrogen, technetium, polonium and cesium may be lost during sample heating.

Recounts
Sample 1203961282 (LCS) was recounted due to high recovery. The recount is reported.

Miscellaneous Information

Additional Comments
The matrix spike and matrix spike duplicate, 1203961280 (B3HD09MS) and 1203961281 (B3HD09MSD), aliquots were reduced to conserve sample volume.

Product: **TRITIUM_DIST_LSC: COMMON**
Analytical Method: TRITIUM_DIST_LSC
Analytical Procedure: GL-RAD-A-002 REV# 22
Analytical Batch: 1734178

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

GEL Sample ID#	Client Sample Identification
442240011	B3FW03
442240012	B3FW04
442240019	B3HD01
442240022	B3HD06
1203958793	Method Blank (MB)
1203958794	441685007(B3FWR5) Sample Duplicate (DUP)
1203958795	441685007(B3FWR5) Matrix Spike (MS)
1203958796	Laboratory Control Sample (LCS)

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
The matrix spike, 1203958795 (B3FWR5MS), aliquot was reduced to conserve sample volume.

Product: **TC99_EIE_LSC: COMMON**
Analytical Method: TC99_EIE_LSC
Analytical Procedure: GL-RAD-A-059 REV# 5
Analytical Batch: 1735972

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

GEL Sample ID#	Client Sample Identification
442240022	B3HD06
1203963256	Method Blank (MB)
1203963257	442156001(NonSDG) Sample Duplicate (DUP)
1203963258	Laboratory Control Sample (LCS)

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

Recounts

Samples 1203963257 (Non SDG 442156001DUP) and 442240022 (B3HD06) were recounted to verify sample results. Recounts are reported.

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.

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Qualifier Definition Report
for

CPRC001 CH2MHill Plateau Remediation Company

Client SDG: GEL442240 GEL Work Order: 442240

The Qualifiers in this report are defined as follows:

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

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: Heather McCarty **Name: Heather McCarty**

Date: 15 FEB 2018 **Title: Analyst II**

Sample Data Summary

Certificate of Analysis
Sample Summary

SDG Number:	**GEL442240**	**Client:**	**CPRC001**	**Project:**	**CPRC0S18001**
Lab Sample ID:	**442240011**	**Date Collected:**	**01/23/2018 07:15**	**Matrix:**	**WATER**
		Date Received:	**01/25/2018 08:55**		
Client ID:	**B3FW03**			**Prep Basis:**	**"As Received"**
Batch ID:	**1735174**	**Method:**	**SRISO_SEP_PRECIP_GPC**	**SOP Ref:**	**GL-RAD-A-004**
Run Date:	**01/31/2018 13:59**	**Analyst:**	**KSD1**	**Instrument:**	**PIC7D**
Data File:	**S1735174cl.xls**	**Aliquot:**	**300 mL**	**Count Time:**	**60 min**
Prep Batch:	**1735174**	**Prep Method:**	**EPA 905.0 Modified/DOE RP5**		
Prep Date:	**01/30/2018 09:22**				

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
10098-97-2	Strontium-90	U	-0.568	pCi/L	+/-0.652	0.652	1.46	2.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
Strontium Carrier	3.70	4.30	mg	86	(40%-110%)

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error.
TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).
The MDC is a sample specific MDC.

Rad

Certificate of Analysis
Sample Summary

SDG Number:	**GEL442240**	**Client:**	**CPRC001**	**Project:**	**CPRC0S18001**
Lab Sample ID:	**442240011**	**Date Collected:**	**01/23/2018 07:15**	**Matrix:**	**WATER**
		Date Received:	**01/25/2018 08:55**		
Client ID:	**B3FW03**			**Prep Basis:**	**"As Received"**
Batch ID:	**1735191**	**Method:**	**9310_ALPHABETA_GPC**	**SOP Ref:**	**GL-RAD-A-001**
Run Date:	**01/31/2018 18:03**	**Analyst:**	**BXG2**	**Instrument:**	**LB4100A1**
Data File:	**AB1735191r1.xls**	**Aliquot:**	**150 mL**	**Count Time:**	**500 min**
Prep Batch:	**1735191**	**Prep Method:**	**EPA 900.0/SW846 9310**		
Prep Date:	**01/31/2018 10:53**				

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
12587-46-1	Alpha *ALPHA*	U	-0.325	pCi/L	+/-0.382	0.382	0.761	3.00
12587-47-2	Beta *BETA*	U	0.268	pCi/L	+/-0.841	0.842	1.44	4.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error.
TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).
The MDC is a sample specific MDC.

Certificate of Analysis
Sample Summary

SDG Number:	**GEL442240**	**Client:**	**CPRC001**	**Project:**	**CPRC0S18001**
Lab Sample ID:	**442240011**	**Date Collected:**	**01/23/2018 07:15**	**Matrix:**	**WATER**
		Date Received:	**01/25/2018 08:55**		
Client ID:	**B3FW03**			**Prep Basis:**	**"As Received"**
Batch ID:	**1733809**	**Method:**	**DOE EML HASL-300,I-01 Mo**	**SOP Ref:**	**GL-RAD-A-006**
Run Date:	**01/26/2018 13:40**	**Analyst:**	**BSW1**	**Instrument:**	**XRAY6**
Data File:	**I442240011.CNF;1**	**Aliquot:**	**1.2 L**	**Count Time:**	**120 min**
Prep Batch:	**1733809**	**Prep Method:**	**DOE EML HASL-300,I-01 M**		
Prep Date:	**01/25/2018 11:49**				

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
15046-84-1	Iodine-129	U	0.0249	pCi/L	+/-0.150	0.151	0.442	1.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error.
TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).
The MDC is a sample specific MDC.

Certificate of Analysis
Sample Summary

SDG Number:	**GEL442240**	**Client:**	**CPRC001**	**Project:**	**CPRC0S18001**
Lab Sample ID:	**442240011**	**Date Collected:**	**01/23/2018 07:15**	**Matrix:**	**WATER**
		Date Received:	**01/25/2018 08:55**		
Client ID:	**B3FW03**			**Prep Basis:**	**"As Received"**
Batch ID:	**1734330**	**Method:**	**901.1_GAMMA_GS**	**SOP Ref:**	**GL-RAD-A-013**
Run Date:	**01/26/2018 06:42**	**Analyst:**	**BSW1**	**Instrument:**	**GAM41**
Data File:	**G442240011.CNF;1**	**Aliquot:**	**0.5 L**	**Count Time:**	**240 min**
Prep Batch:	**1734330**	**Prep Method:**	**EPA 901.1**		
Prep Date:	**01/25/2018 11:55**				

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
10045-97-3	Cesium-137	U	-1.92	pCi/L	+/-5.07	5.14	6.91	15.0
10198-40-0	Cobalt-60	U	-1.64	pCi/L	+/-3.56	3.64	6.27	
14683-23-9	Europium-152	U	-2.42	pCi/L	+/-9.93	10.0	16.1	
15585-10-1	Europium-154	U	-0.769	pCi/L	+/-9.92	9.93	19.2	
14391-16-3	Europium-155	U	0.263	pCi/L	+/-9.40	9.41	14.3	

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error.
TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).
The MDC is a sample specific MDC.

Certificate of Analysis
Sample Summary

SDG Number:	**GEL442240**	**Client:**	**CPRC001**	**Project:**	**CPRC0S18001**
Lab Sample ID:	**442240011**	**Date Collected:**	**01/23/2018 07:15**	**Matrix:**	**WATER**
		Date Received:	**01/25/2018 08:55**		
Client ID:	**B3FW03**			**Prep Basis:**	**"As Received"**
Batch ID:	**1734178**	**Method:**	**TRITIUM_DIST_LSC**	**SOP Ref:**	**GL-RAD-A-002**
Run Date:	**01/29/2018 16:44**	**Analyst:**	**BXM4**	**Instrument:**	**LSCMOCHA**
Data File:	**T1734178.xls**	**Aliquot:**	**50 mL**	**Count Time:**	**50 min**
Prep Batch:	**1734178**	**Prep Method:**	**EPA 906.0 Modified**		
Prep Date:	**01/29/2018 11:11**				

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
10028-17-8	Tritium	U	0.492	pCi/L	+/-167	167	293	400

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error.
TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).
The MDC is a sample specific MDC.

Certificate of Analysis
Sample Summary

SDG Number:	**GEL442240**	**Client:**	**CPRC001**	**Project:**	**CPRC0S18001**
Lab Sample ID:	**442240012**	**Date Collected:**	**01/23/2018 08:11**	**Matrix:**	**WATER**
		Date Received:	**01/25/2018 08:55**		
Client ID:	**B3FW04**			**Prep Basis:**	**"As Received"**
Batch ID:	**1735174**	**Method:**	**SRISO_SEP_PRECIP_GPC**	**SOP Ref:**	**GL-RAD-A-004**
Run Date:	**01/31/2018 13:59**	**Analyst:**	**KSD1**	**Instrument:**	**PIC8A**
Data File:	**S1735174cl.xls**	**Aliquot:**	**300 mL**	**Count Time:**	**60 min**
Prep Batch:	**1735174**	**Prep Method:**	**EPA 905.0 Modified/DOE RP5**		
Prep Date:	**01/30/2018 09:22**				

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
10098-97-2	Strontium-90	U	-0.751	pCi/L	+/-0.582	0.582	1.42	2.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
Strontium Carrier	3.70	4.30	mg	86	(40%-110%)

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error.
TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).
The MDC is a sample specific MDC.

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Certificate of Analysis
Sample Summary

SDG Number:	**GEL442240**	**Client:**	**CPRC001**	**Project:**	**CPRC0S18001**
Lab Sample ID:	**442240012**	**Date Collected:**	**01/23/2018 08:11**	**Matrix:**	**WATER**
		Date Received:	**01/25/2018 08:55**		
Client ID:	**B3FW04**			**Prep Basis:**	**"As Received"**
Batch ID:	**1735191**	**Method:**	**9310_ALPHABETA_GPC**	**SOP Ref:**	**GL-RAD-A-001**
Run Date:	**01/31/2018 18:03**	**Analyst:**	**BXG2**	**Instrument:**	**LB4100A2**
Data File:	**AB1735191r1.xls**	**Aliquot:**	**150 mL**	**Count Time:**	**500 min**
Prep Batch:	**1735191**	**Prep Method:**	**EPA 900.0/SW846 9310**		
Prep Date:	**01/31/2018 10:53**				

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
12587-46-1	Alpha *ALPHA*		6.82	pCi/L	+/-1.34	1.79	1.41	3.00
12587-47-2	Beta *BETA*		25.9	pCi/L	+/-1.37	4.55	1.35	4.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error.
TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).
The MDC is a sample specific MDC.

Certificate of Analysis
Sample Summary

SDG Number:	**GEL442240**	**Client:**	**CPRC001**	**Project:**	**CPRC0S18001**
Lab Sample ID:	**442240012**	**Date Collected:**	**01/23/2018 08:11**	**Matrix:**	**WATER**
		Date Received:	**01/25/2018 08:55**		
Client ID:	**B3FW04**			**Prep Basis:**	**"As Received"**
Batch ID:	**1733809**	**Method:**	**DOE EML HASL-300,I-01 Mo**	**SOP Ref:**	**GL-RAD-A-006**
Run Date:	**01/26/2018 15:44**	**Analyst:**	**BSW1**	**Instrument:**	**GAM05**
Data File:	**I442240012.CNF;1**	**Aliquot:**	**1.2 L**	**Count Time:**	**120 min**
Prep Batch:	**1733809**	**Prep Method:**	**DOE EML HASL-300,I-01 M**		
Prep Date:	**01/25/2018 11:49**				

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
15046-84-1	Iodine-129		1.47	pCi/L	+/-1.04	1.05	0.732	1.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error.
TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).
The MDC is a sample specific MDC.

Certificate of Analysis
Sample Summary

SDG Number:	**GEL442240**	**Client:**	**CPRC001**	**Project:**	**CPRC0S18001**
Lab Sample ID:	**442240012**	**Date Collected:**	**01/23/2018 08:11**	**Matrix:**	**WATER**
		Date Received:	**01/25/2018 08:55**		
Client ID:	**B3FW04**			**Prep Basis:**	**"As Received"**
Batch ID:	**1734330**	**Method:**	**901.1_GAMMA_GS**	**SOP Ref:**	**GL-RAD-A-013**
Run Date:	**01/26/2018 07:34**	**Analyst:**	**BSW1**	**Instrument:**	**GAM44**
Data File:	**G442240012.CNF;1**	**Aliquot:**	**0.5 L**	**Count Time:**	**240 min**
Prep Batch:	**1734330**	**Prep Method:**	**EPA 901.1**		
Prep Date:	**01/25/2018 11:55**				

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
10045-97-3	Cesium-137	U	0.195	pCi/L	+/-3.60	3.61	6.60	15.0
10198-40-0	Cobalt-60	U	0.958	pCi/L	+/-3.68	3.71	7.45	
14683-23-9	Europium-152	U	0.0479	pCi/L	+/-9.42	9.42	17.5	
15585-10-1	Europium-154	U	-7.96	pCi/L	+/-10.3	10.9	17.2	
14391-16-3	Europium-155	U	-2.32	pCi/L	+/-11.2	11.3	19.6	

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error.
TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).
The MDC is a sample specific MDC.

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Certificate of Analysis
Sample Summary

SDG Number:	**GEL442240**	**Client:**	**CPRC001**	**Project:**	**CPRC0S18001**
Lab Sample ID:	**442240012**	**Date Collected:**	**01/23/2018 08:11**	**Matrix:**	**WATER**
		Date Received:	**01/25/2018 08:55**		
Client ID:	**B3FW04**			**Prep Basis:**	**"As Received"**
Batch ID:	**1734178**	**Method:**	**TRITIUM_DIST_LSC**	**SOP Ref:**	**GL-RAD-A-002**
Run Date:	**01/29/2018 17:35**	**Analyst:**	**BXM4**	**Instrument:**	**LSCMOCHA**
Data File:	**T1734178.xls**	**Aliquot:**	**50 mL**	**Count Time:**	**50 min**
Prep Batch:	**1734178**	**Prep Method:**	**EPA 906.0 Modified**		
Prep Date:	**01/29/2018 11:11**				

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
10028-17-8	Tritium		11500	pCi/L	+/-457	2270	293	400

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error.
TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).
The MDC is a sample specific MDC.

Certificate of Analysis
Sample Summary

SDG Number:	**GEL442240**	**Client:**	**CPRC001**	**Project:**	**CPRC0S18001**
Lab Sample ID:	**442240019**	**Date Collected:**	**01/23/2018 09:45**	**Matrix:**	**WATER**
		Date Received:	**01/24/2018 09:00**		
Client ID:	**B3HD01**			**Prep Basis:**	**"As Received"**
Batch ID:	**1735174**	**Method:**	**SRISO_SEP_PRECIP_GPC**	**SOP Ref:**	**GL-RAD-A-004**
Run Date:	**01/31/2018 17:47**	**Analyst:**	**KSD1**	**Instrument:**	**PIC9B**
Data File:	**S1735174cl.xls**	**Aliquot:**	**300 mL**	**Count Time:**	**60 min**
Prep Batch:	**1735174**	**Prep Method:**	**EPA 905.0 Modified/DOE RP5**		
Prep Date:	**01/30/2018 09:22**				

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
10098-97-2	Strontium-90	U	0.355	pCi/L	+/-0.691	0.694	1.23	2.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
Strontium Carrier	4.00	4.30	mg	93	(40%-110%)

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error.
TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).
The MDC is a sample specific MDC.

Certificate of Analysis
Sample Summary

SDG Number:	**GEL442240**	**Client:**	**CPRC001**	**Project:**	**CPRC0S18001**
Lab Sample ID:	**442240019**	**Date Collected:**	**01/23/2018 09:45**	**Matrix:**	**WATER**
		Date Received:	**01/24/2018 09:00**		
Client ID:	**B3HD01**			**Prep Basis:**	**"As Received"**
Batch ID:	**1735191**	**Method:**	**9310_ALPHABETA_GPC**	**SOP Ref:**	**GL-RAD-A-001**
Run Date:	**01/31/2018 18:04**	**Analyst:**	**BXG2**	**Instrument:**	**LB4100A3**
Data File:	**AB1735191r1.xls**	**Aliquot:**	**150 mL**	**Count Time:**	**500 min**
Prep Batch:	**1735191**	**Prep Method:**	**EPA 900.0/SW846 9310**		
Prep Date:	**01/31/2018 10:53**				

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
12587-46-1	Alpha *ALPHA*	U	1.18	pCi/L	+/-0.821	0.847	1.30	3.00
12587-47-2	Beta *BETA*		7.23	pCi/L	+/-1.05	1.59	1.49	4.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error.
TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).
The MDC is a sample specific MDC.

Certificate of Analysis
Sample Summary

SDG Number:	**GEL442240**	**Client:**	**CPRC001**	**Project:**	**CPRC0S18001**
Lab Sample ID:	**442240019**	**Date Collected:**	**01/23/2018 09:45**	**Matrix:**	**WATER**
		Date Received:	**01/24/2018 09:00**		
Client ID:	**B3HD01**			**Prep Basis:**	**"As Received"**
Batch ID:	**1733809**	**Method:**	**DOE EML HASL-300,I-01 Mo**	**SOP Ref:**	**GL-RAD-A-006**
Run Date:	**01/26/2018 15:44**	**Analyst:**	**BSW1**	**Instrument:**	**GAM21**
Data File:	**I442240019.CNF;1**	**Aliquot:**	**1.2 L**	**Count Time:**	**120 min**
Prep Batch:	**1733809**	**Prep Method:**	**DOE EML HASL-300,I-01 M**		
Prep Date:	**01/25/2018 11:49**				

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
15046-84-1	Iodine-129		5.89	pCi/L	+/-1.06	1.21	0.616	1.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error.
TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).
The MDC is a sample specific MDC.

Certificate of Analysis
Sample Summary

SDG Number:	**GEL442240**	**Client:**	**CPRC001**	**Project:**	**CPRC0S18001**
Lab Sample ID:	**442240019**	**Date Collected:**	**01/23/2018 09:45**	**Matrix:**	**WATER**
		Date Received:	**01/24/2018 09:00**		
Client ID:	**B3HD01**			**Prep Basis:**	**"As Received"**
Batch ID:	**1734178**	**Method:**	**TRITIUM_DIST_LSC**	**SOP Ref:**	**GL-RAD-A-002**
Run Date:	**01/29/2018 18:27**	**Analyst:**	**BXM4**	**Instrument:**	**LSCMOCHA**
Data File:	**T1734178.xls**	**Aliquot:**	**50 mL**	**Count Time:**	**50 min**
Prep Batch:	**1734178**	**Prep Method:**	**EPA 906.0 Modified**		
Prep Date:	**01/29/2018 11:11**				

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
10028-17-8	Tritium		12800	pCi/L	+/-478	2520	293	400

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error.
TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).
The MDC is a sample specific MDC.

Rad

Certificate of Analysis
Sample Summary

SDG Number:	**GEL442240**	**Client:**	**CPRC001**	**Project:**	**CPRC0S18001**
Lab Sample ID:	**442240020**	**Date Collected:**	**01/23/2018 11:35**	**Matrix:**	**WATER**
		Date Received:	**01/24/2018 09:00**		
Client ID:	**B3HD02**			**Prep Basis:**	**"As Received"**
Batch ID:	**1735174**	**Method:**	**SRISO_SEP_PRECIP_GPC**	**SOP Ref:**	**GL-RAD-A-004**
Run Date:	**01/31/2018 13:59**	**Analyst:**	**KSD1**	**Instrument:**	**PIC8C**
Data File:	**S1735174cl.xls**	**Aliquot:**	**300 mL**	**Count Time:**	**60 min**
Prep Batch:	**1735174**	**Prep Method:**	**EPA 905.0 Modified/DOE RP5**		
Prep Date:	**01/30/2018 09:22**				

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
10098-97-2	Strontium-90	U	1.02	pCi/L	+/-0.982	0.996	1.61	2.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
Strontium Carrier	3.70	4.30	mg	86	(40%-110%)

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error.
TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).
The MDC is a sample specific MDC.

Certificate of Analysis
Sample Summary

SDG Number:	**GEL442240**	**Client:**	**CPRC001**	**Project:**	**CPRC0S18001**
Lab Sample ID:	**442240020**	**Date Collected:**	**01/23/2018 11:35**	**Matrix:**	**WATER**
		Date Received:	**01/24/2018 09:00**		
Client ID:	**B3HD02**			**Prep Basis:**	**"As Received"**
Batch ID:	**1735191**	**Method:**	**9310_ALPHABETA_GPC**	**SOP Ref:**	**GL-RAD-A-001**
Run Date:	**01/31/2018 18:04**	**Analyst:**	**BXG2**	**Instrument:**	**LB4100B1**
Data File:	**AB1735191r1.xls**	**Aliquot:**	**150 mL**	**Count Time:**	**500 min**
Prep Batch:	**1735191**	**Prep Method:**	**EPA 900.0/SW846 9310**		
Prep Date:	**01/31/2018 10:53**				

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
12587-46-1	Alpha *ALPHA*		2.95	pCi/L	+/-1.38	1.46	2.07	3.00
12587-47-2	Beta *BETA*		8.88	pCi/L	+/-1.16	1.87	1.59	4.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error.
TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).
The MDC is a sample specific MDC.

Certificate of Analysis
Sample Summary

SDG Number:	**GEL442240**	**Client:**	**CPRC001**	**Project:**	**CPRC0S18001**
Lab Sample ID:	**442240020**	**Date Collected:**	**01/23/2018 11:35**	**Matrix:**	**WATER**
		Date Received:	**01/24/2018 09:00**		
Client ID:	**B3HD02**			**Prep Basis:**	**"As Received"**
Batch ID:	**1733809**	**Method:**	**DOE EML HASL-300,I-01 Mo**	**SOP Ref:**	**GL-RAD-A-006**
Run Date:	**01/26/2018 15:45**	**Analyst:**	**BSW1**	**Instrument:**	**XRAY1**
Data File:	**I442240020.CNF;1**	**Aliquot:**	**1.2 L**	**Count Time:**	**120 min**
Prep Batch:	**1733809**	**Prep Method:**	**DOE EML HASL-300,I-01 M**		
Prep Date:	**01/25/2018 11:49**				

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
15046-84-1	Iodine-129		5.42	pCi/L	+/-0.985	1.12	0.596	1.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error.
TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).
The MDC is a sample specific MDC.

Certificate of Analysis
Sample Summary

SDG Number:	**GEL442240**	**Client:**	**CPRC001**	**Project:**	**CPRC0S18001**
Lab Sample ID:	**442240021**	**Date Collected:**	**01/23/2018 07:00**	**Matrix:**	**WATER**
		Date Received:	**01/24/2018 09:00**		
Client ID:	**B3HD03**			**Prep Basis:**	**"As Received"**
Batch ID:	**1735174**	**Method:**	**SRISO_SEP_PRECIP_GPC**	**SOP Ref:**	**GL-RAD-A-004**
Run Date:	**01/31/2018 13:59**	**Analyst:**	**KSD1**	**Instrument:**	**PIC8D**
Data File:	**S1735174cl.xls**	**Aliquot:**	**300 mL**	**Count Time:**	**60 min**
Prep Batch:	**1735174**	**Prep Method:**	**EPA 905.0 Modified/DOE RP5**		
Prep Date:	**01/30/2018 09:22**				

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
10098-97-2	Strontium-90	U	-0.342	pCi/L	+/-0.765	0.765	1.54	2.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
Strontium Carrier	4.00	4.30	mg	93	(40%-110%)

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error.
TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).
The MDC is a sample specific MDC.

Certificate of Analysis
Sample Summary

SDG Number:	**GEL442240**	**Client:**	**CPRC001**	**Project:**	**CPRC0S18001**
Lab Sample ID:	**442240021**	**Date Collected:**	**01/23/2018 07:00**	**Matrix:**	**WATER**
		Date Received:	**01/24/2018 09:00**		
Client ID:	**B3HD03**			**Prep Basis:**	**"As Received"**
Batch ID:	**1735191**	**Method:**	**9310_ALPHABETA_GPC**	**SOP Ref:**	**GL-RAD-A-001**
Run Date:	**01/31/2018 18:04**	**Analyst:**	**BXG2**	**Instrument:**	**LB4100B4**
Data File:	**AB1735191r1.xls**	**Aliquot:**	**150 mL**	**Count Time:**	**500 min**
Prep Batch:	**1735191**	**Prep Method:**	**EPA 900.0/SW846 9310**		
Prep Date:	**01/31/2018 10:53**				

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
12587-46-1	Alpha *ALPHA*	U	-0.502	pCi/L	+/-0.501	0.501	1.01	3.00
12587-47-2	Beta *BETA*	U	0.941	pCi/L	+/-0.946	0.958	1.58	4.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error.
TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).
The MDC is a sample specific MDC.

Certificate of Analysis
Sample Summary

SDG Number:	**GEL442240**	**Client:**	**CPRC001**	**Project:**	**CPRC0S18001**
Lab Sample ID:	**442240021**	**Date Collected:**	**01/23/2018 07:00**	**Matrix:**	**WATER**
		Date Received:	**01/24/2018 09:00**		
Client ID:	**B3HD03**			**Prep Basis:**	**"As Received"**
Batch ID:	**1733809**	**Method:**	**DOE EML HASL-300,I-01 Mo**	**SOP Ref:**	**GL-RAD-A-006**
Run Date:	**01/26/2018 15:45**	**Analyst:**	**BSW1**	**Instrument:**	**XRAY3**
Data File:	**I442240021.CNF;1**	**Aliquot:**	**1.2 L**	**Count Time:**	**120 min**
Prep Batch:	**1733809**	**Prep Method:**	**DOE EML HASL-300,I-01 M**		
Prep Date:	**01/25/2018 11:49**				

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
15046-84-1	Iodine-129	U	-0.147	pCi/L	+/-0.261	0.269	0.462	1.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error.
TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).
The MDC is a sample specific MDC.

Certificate of Analysis
Sample Summary

SDG Number:	**GEL442240**	**Client:**	**CPRC001**	**Project:**	**CPRC0S18001**
Lab Sample ID:	**442240022**	**Date Collected:**	**01/22/2018 12:00**	**Matrix:**	**WATER**
		Date Received:	**01/24/2018 09:00**		
Client ID:	**B3HD06**			**Prep Basis:**	**"As Received"**
Batch ID:	**1735174**	**Method:**	**SRISO_SEP_PRECIP_GPC**	**SOP Ref:**	**GL-RAD-A-004**
Run Date:	**02/02/2018 14:49**	**Analyst:**	**KSD1**	**Instrument:**	**PIC3B**
Data File:	**S1735174cl.xls**	**Aliquot:**	**300 mL**	**Count Time:**	**60 min**
Prep Batch:	**1735174**	**Prep Method:**	**EPA 905.0 Modified/DOE RP5**		
Prep Date:	**01/30/2018 09:22**				

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
10098-97-2	Strontium-90	U	0.759	pCi/L	+/-0.941	0.949	1.59	2.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
Strontium Carrier	4.00	4.30	mg	93	(40%-110%)

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error.
TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).
The MDC is a sample specific MDC.

Certificate of Analysis
Sample Summary

SDG Number:	**GEL442240**	**Client:**	**CPRC001**	**Project:**	**CPRC0S18001**
Lab Sample ID:	**442240022**	**Date Collected:**	**01/22/2018 12:00**	**Matrix:**	**WATER**
		Date Received:	**01/24/2018 09:00**		
Client ID:	**B3HD06**			**Prep Basis:**	**"As Received"**
Batch ID:	**1735191**	**Method:**	**9310_ALPHABETA_GPC**	**SOP Ref:**	**GL-RAD-A-001**
Run Date:	**01/31/2018 18:37**	**Analyst:**	**BXG2**	**Instrument:**	**LB4100C1**
Data File:	**AB1735191r1.xls**	**Aliquot:**	**150 mL**	**Count Time:**	**500 min**
Prep Batch:	**1735191**	**Prep Method:**	**EPA 900.0/SW846 9310**		
Prep Date:	**01/31/2018 10:53**				

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
12587-46-1	Alpha *ALPHA*		9.72	pCi/L	+/-1.85	2.48	2.31	3.00
12587-47-2	Beta *BETA*		66.5	pCi/L	+/-1.99	11.2	1.53	4.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error.
TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).
The MDC is a sample specific MDC.

Certificate of Analysis
Sample Summary

SDG Number:	**GEL442240**	**Client:**	**CPRC001**	**Project:**	**CPRC0S18001**
Lab Sample ID:	**442240022**	**Date Collected:**	**01/22/2018 12:00**	**Matrix:**	**WATER**
		Date Received:	**01/24/2018 09:00**		
Client ID:	**B3HD06**			**Prep Basis:**	**"As Received"**
Batch ID:	**1733809**	**Method:**	**DOE EML HASL-300,I-01 Mo**	**SOP Ref:**	**GL-RAD-A-006**
Run Date:	**01/26/2018 15:45**	**Analyst:**	**BSW1**	**Instrument:**	**XRAY4**
Data File:	**I442240022.CNF;1**	**Aliquot:**	**1.2 L**	**Count Time:**	**120 min**
Prep Batch:	**1733809**	**Prep Method:**	**DOE EML HASL-300,I-01 M**		
Prep Date:	**01/25/2018 11:49**				

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
15046-84-1	Iodine-129		2.14	pCi/L	+/-0.858	0.885	0.717	1.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error.
TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).
The MDC is a sample specific MDC.

Certificate of Analysis
Sample Summary

SDG Number:	**GEL442240**	**Client:**	**CPRC001**	**Project:**	**CPRC0S18001**
Lab Sample ID:	**442240022**	**Date Collected:**	**01/22/2018 12:00**	**Matrix:**	**WATER**
		Date Received:	**01/24/2018 09:00**		
Client ID:	**B3HD06**			**Prep Basis:**	**"As Received"**
Batch ID:	**1734178**	**Method:**	**TRITIUM_DIST_LSC**	**SOP Ref:**	**GL-RAD-A-002**
Run Date:	**01/29/2018 19:18**	**Analyst:**	**BXM4**	**Instrument:**	**LSCMOCHA**
Data File:	**T1734178.xls**	**Aliquot:**	**50 mL**	**Count Time:**	**29.8500003814697 min**
Prep Batch:	**1734178**	**Prep Method:**	**EPA 906.0 Modified**		
Prep Date:	**01/29/2018 11:11**				

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
10028-17-8	Tritium		67200	pCi/L	+/-1340	13100	343	400

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error.
TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).
The MDC is a sample specific MDC.

Certificate of Analysis
Sample Summary

SDG Number:	**GEL442240**	**Client:**	**CPRC001**	**Project:**	**CPRC0S18001**
Lab Sample ID:	**442240022**	**Date Collected:**	**01/22/2018 12:00**	**Matrix:**	**WATER**
		Date Received:	**01/24/2018 09:00**		
Client ID:	**B3HD06**			**Prep Basis:**	**"As Received"**
Batch ID:	**1735972**	**Method:**	**TC99_EIE_LSC**	**SOP Ref:**	**GL-RAD-A-059**
Run Date:	**02/13/2018 14:29**	**Analyst:**	**CXS7**	**Instrument:**	**LSCGOLD**
Data File:	**E1735972R.xls**	**Aliquot:**	**100 mL**	**Count Time:**	**15 min**
Prep Batch:	**1735972**	**Prep Method:**	**DOE EML HASL-300, Tc-02-**		
Prep Date:	**02/08/2018 15:24**				

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
14133-76-7	Technetium-99		96.8	pCi/L	+/-26.6	28.7	39.4	50.0

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
Technetium-99m Tracer	37200	38500	CPM	96.7	(30%-105%)

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error.
TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).
The MDC is a sample specific MDC.

Certificate of Analysis
Sample Summary

SDG Number:	**GEL442240**	**Client:**	**CPRC001**	**Project:**	**CPRC0S18001**
Lab Sample ID:	**442240023**	**Date Collected:**	**01/22/2018 11:18**	**Matrix:**	**WATER**
		Date Received:	**01/24/2018 09:00**		
Client ID:	**B3HD09**			**Prep Basis:**	**"As Received"**
Batch ID:	**1735191**	**Method:**	**9310_ALPHABETA_GPC**	**SOP Ref:**	**GL-RAD-A-001**
Run Date:	**01/31/2018 18:37**	**Analyst:**	**BXG2**	**Instrument:**	**LB4100C2**
Data File:	**AB1735191r1.xls**	**Aliquot:**	**150 mL**	**Count Time:**	**500 min**
Prep Batch:	**1735191**	**Prep Method:**	**EPA 900.0/SW846 9310**		
Prep Date:	**01/31/2018 10:53**				

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
12587-46-1	Alpha *ALPHA*		3.75	pCi/L	+/-1.23	1.38	1.66	3.00
12587-47-2	Beta *BETA*		18.4	pCi/L	+/-1.21	3.32	1.33	4.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error.
TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).
The MDC is a sample specific MDC.

Certificate of Analysis
Sample Summary

SDG Number:	**GEL442240**	**Client:**	**CPRC001**	**Project:**	**CPRC0S18001**
Lab Sample ID:	**442240023**	**Date Collected:**	**01/22/2018 11:18**	**Matrix:**	**WATER**
		Date Received:	**01/24/2018 09:00**		
Client ID:	**B3HD09**			**Prep Basis:**	**"As Received"**
Batch ID:	**1733809**	**Method:**	**DOE EML HASL-300,I-01 Mo**	**SOP Ref:**	**GL-RAD-A-006**
Run Date:	**01/26/2018 15:46**	**Analyst:**	**BSW1**	**Instrument:**	**XRAY5**
Data File:	**I442240023.CNF;1**	**Aliquot:**	**1.2 L**	**Count Time:**	**120 min**
Prep Batch:	**1733809**	**Prep Method:**	**DOE EML HASL-300,I-01 M**		
Prep Date:	**01/25/2018 11:49**				

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
15046-84-1	Iodine-129	U	0.359	pCi/L	+/-0.746	0.747	0.746	1.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error.
TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).
The MDC is a sample specific MDC.

Rad

Certificate of Analysis
Sample Summary

SDG Number:	**GEL442240**	**Client:**	**CPRC001**	**Project:**	**CPRC0S18001**
Lab Sample ID:	**442240024**	**Date Collected:**	**01/23/2018 09:49**	**Matrix:**	**WATER**
		Date Received:	**01/25/2018 08:55**		
Client ID:	**B3HD25**			**Prep Basis:**	**"As Received"**
Batch ID:	**1735191**	**Method:**	**9310_ALPHABETA_GPC**	**SOP Ref:**	**GL-RAD-A-001**
Run Date:	**01/31/2018 18:37**	**Analyst:**	**BXG2**	**Instrument:**	**LB4100C3**
Data File:	**AB1735191r1.xls**	**Aliquot:**	**150 mL**	**Count Time:**	**500 min**
Prep Batch:	**1735191**	**Prep Method:**	**EPA 900.0/SW846 9310**		
Prep Date:	**01/31/2018 10:53**				

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
12587-46-1	Alpha *ALPHA*		2.82	pCi/L	+/-0.887	1.01	1.20	3.00
12587-47-2	Beta *BETA*		4.15	pCi/L	+/-0.925	1.16	1.41	4.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits

Comments:

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

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

The MDC is a sample specific MDC.

Rad

Certificate of Analysis
Sample Summary

SDG Number:	**GEL442240**	**Client:**	**CPRC001**	**Project:**	**CPRC0S18001**
Lab Sample ID:	**442240024**	**Date Collected:**	**01/23/2018 09:49**	**Matrix:**	**WATER**
		Date Received:	**01/25/2018 08:55**		
Client ID:	**B3HD25**			**Prep Basis:**	**"As Received"**
Batch ID:	**1733809**	**Method:**	**DOE EML HASL-300,I-01 Mo**	**SOP Ref:**	**GL-RAD-A-006**
Run Date:	**01/26/2018 15:46**	**Analyst:**	**BSW1**	**Instrument:**	**XRAY6**
Data File:	**I442240024.CNF;1**	**Aliquot:**	**1.2 L**	**Count Time:**	**120 min**
Prep Batch:	**1733809**	**Prep Method:**	**DOE EML HASL-300,I-01 M**		
Prep Date:	**01/25/2018 11:49**				

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
15046-84-1	Iodine-129	UX	0.00	pCi/L	+/-0.572	0.577	0.554	1.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits

Comments:

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

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

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Certificate of Analysis
Sample Summary

SDG Number:	**GEL442240**	**Client:**	**CPRC001**	**Project:**	**CPRC0S18001**
Lab Sample ID:	**442240025**	**Date Collected:**	**01/23/2018 09:49**	**Matrix:**	**WATER**
		Date Received:	**01/25/2018 08:55**		
Client ID:	**B3HD26**			**Prep Basis:**	**"As Received"**
Batch ID:	**1735191**	**Method:**	**9310_ALPHABETA_GPC**	**SOP Ref:**	**GL-RAD-A-001**
Run Date:	**01/31/2018 18:04**	**Analyst:**	**BXG2**	**Instrument:**	**LB4100E1**
Data File:	**AB1735191r1.xls**	**Aliquot:**	**150 mL**	**Count Time:**	**500 min**
Prep Batch:	**1735191**	**Prep Method:**	**EPA 900.0/SW846 9310**		
Prep Date:	**01/31/2018 10:53**				

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
12587-46-1	Alpha *ALPHA*		1.88	pCi/L	+/-0.784	0.845	1.15	3.00
12587-47-2	Beta *BETA*		4.65	pCi/L	+/-0.937	1.22	1.40	4.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits

Comments:

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

The MDC is a sample specific MDC.

Certificate of Analysis
Sample Summary

SDG Number:	**GEL442240**	**Client:**	**CPRC001**	**Project:**	**CPRC0S18001**
Lab Sample ID:	**442240025**	**Date Collected:**	**01/23/2018 09:49**	**Matrix:**	**WATER**
		Date Received:	**01/25/2018 08:55**		
Client ID:	**B3HD26**			**Prep Basis:**	**"As Received"**
Batch ID:	**1733809**	**Method:**	**DOE EML HASL-300,I-01 Mo**	**SOP Ref:**	**GL-RAD-A-006**
Run Date:	**01/29/2018 06:10**	**Analyst:**	**BSW1**	**Instrument:**	**XRAY1**
Data File:	**I442240025.CNF;1**	**Aliquot:**	**1.2 L**	**Count Time:**	**120 min**
Prep Batch:	**1733809**	**Prep Method:**	**DOE EML HASL-300,I-01 M**		
Prep Date:	**01/25/2018 11:49**				

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
15046-84-1	Iodine-129		0.777	pCi/L	+/-0.615	0.620	0.611	1.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits

Comments:

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

The MDC is a sample specific MDC.

Quality Control Summary

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

QC Summary

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

Workorder: 442240

Report Date: February 15, 2018

Parmname	NOM	Sample	Qual	QC	Units	QC Criteria	Range	Analyst	Date Time
Rad Gamma Spec									
Batch 1733809									
QC1203957837 MB									
Iodine-129			U	0.270	pCi/L			BSW1	01/29/1806:11
Uncert:				+/-0.404					
TPU:				+/-0.423					
QC1203957838 441685007 DUP									
Iodine-129	U	-0.272	U	-0.242	pCi/L				01/29/1806:40
Uncert:		+/-0.462		+/-0.407		RPD:	0 N/A		
TPU:		+/-0.479		+/-0.422		RER:	0.0928 (0-2)		
QC1203957839 441685007 MS									
Iodine-129	34.7 U	-0.272		33.2	pCi/L	REC:	97 (75%-125%)		01/29/1807:24
Uncert:		+/-0.462		+/-3.12					
TPU:		+/-0.479		+/-4.55					
QC1203957840 LCS									
Iodine-129	34.7			36.6	pCi/L	REC:	106 (80%-120%)		01/29/1808:18
Uncert:				+/-4.18					
TPU:				+/-5.55					
Batch 1734330									
QC1203959126 MB									
Cesium-137			U	-1.88	pCi/L			BSW1	01/26/1807:35
Uncert:				+/-3.04					
TPU:				+/-3.16					
Cobalt-60			U	-0.141	pCi/L				
Uncert:				+/-2.99					
TPU:				+/-2.99					
Europium-152			U	13.5	pCi/L				
Uncert:				+/-8.54					
TPU:				+/-10.6					
Europium-154			U	-0.50	pCi/L				
Uncert:				+/-9.43					
TPU:				+/-9.43					
Europium-155			U	-5.61	pCi/L				
Uncert:				+/-9.24					
TPU:				+/-9.59					
QC1203959127 442240011 DUP									
Cesium-137	U	-1.92	U	1.66	pCi/L				01/26/1811:11
Uncert:		+/-5.07		+/-2.87		RPD:	0 N/A		
TPU:		+/-5.14		+/-2.97		RER:	1.18 (0-2)		
Cobalt-60	U	-1.64	U	2.06	pCi/L				
Uncert:		+/-3.56		+/-2.28		RPD:	0 N/A		
TPU:		+/-3.64		+/-2.47		RER:	1.65 (0-2)		
Europium-152	U	-2.42	U	-6.0	pCi/L				
Uncert:		+/-9.93		+/-7.11		RPD:	0 N/A		
TPU:		+/-10.0		+/-7.62		RER:	0.557 (0-2)		
Europium-154	U	-0.769	U	-2.41	pCi/L				
Uncert:		+/-9.92		+/-6.94		RPD:	0 N/A		

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

QC Summary

Workorder: 442240

Parmname	NOM	Sample	Qual	QC	Units	QC Criteria	Range	Analyst	Date Time
Rad Gamma Spec									
Batch 1734330									
	TPU:	+/-9.93		+/-7.03					
						RER: 0.264	(0-2)		
Europium-155	U	0.263	U	0.800	pCi/L				
	Uncert:	+/-9.40		+/-9.31		RPD: 0	N/A		
	TPU:	+/-9.41		+/-9.32		RER: 0.0795	(0-2)		
QC1203959128 LCS									
Americium-241	1.10E+05			1.22E+05	pCi/L	REC: 111	(80%-120%)		01/29/1808:37
	Uncert:			+/-3160					
	TPU:			+/-16800					
Cesium-137	41500			42000	pCi/L	REC: 101	(80%-120%)		
	Uncert:			+/-832					
	TPU:			+/-3800					
Cobalt-60	35100			38100	pCi/L	REC: 109	(80%-120%)		
	Uncert:			+/-962					
	TPU:			+/-4000					
Europium-152			U	-195	pCi/L				
	Uncert:			+/-371					
	TPU:			+/-382					
Europium-154			U	-71	pCi/L				
	Uncert:			+/-258					
	TPU:			+/-260					
Europium-155			U	-184	pCi/L				
	Uncert:			+/-326					
	TPU:			+/-336					
Rad Gas Flow									
Batch 1735174									
QC1203961245 MB									
Strontium-90			U	-0.275	pCi/L			KSD1	01/31/1813:59
	Uncert:			+/-0.649					
	TPU:			+/-0.649					
**Strontium Carrier	4.30			4.00	mg	REC: 93	(40%-110%)		
QC1203961246 442159005 DUP									
Strontium-90		U -0.394	U	0.422	pCi/L				01/31/1817:47
	Uncert:	+/-0.516		+/-0.782		RPD: 0	N/A		
	TPU:	+/-0.516		+/-0.785		RER: 1.7	(0-2)		
**Strontium Carrier	4.30	4.00		3.80	mg	REC: 88	(40%-110%)		
QC1203961247 LCS									
Strontium-90	78.6			83.8	pCi/L	REC: 107	(80%-120%)		01/31/1813:59
	Uncert:			+/-4.51					
	TPU:			+/-13.9					
**Strontium Carrier	4.30			4.00	mg	REC: 93	(40%-110%)		
Batch 1735191									
QC1203961278 MB									
Alpha			U	0.0962	pCi/L			BXG2	01/31/1818:04
	Uncert:			+/-0.430					
	TPU:			+/-0.430					
Beta			U	0.731	pCi/L				
	Uncert:			+/-0.735					

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Parmname	NOM	Sample	Qual	QC	Units	QC Criteria	Range	Analyst	Date Time
Rad Gas Flow									
Batch 1735191									
	TPU:			+/-0.745					
QC1203961279 442240023 DUP									
Alpha		3.75		4.25	pCi/L				
	Uncert:	+/-1.23		+/-1.44		RPD:	12 (0% - 100%)		
	TPU:	+/-1.38		+/-1.61		RER:	0.457 (0-2)		
Beta		18.4		18.3	pCi/L				
	Uncert:	+/-1.21		+/-1.19		RPD:	1 (0%-20%)		
	TPU:	+/-3.32		+/-3.21		RER:	0.0536 (0-2)		
QC1203961280 442240023 MS									
Alpha	483	3.75		531	pCi/L	REC:	109 (75%-125%)		01/31/1818:03
	Uncert:	+/-1.23		+/-50.7					
	TPU:	+/-1.38		+/-101					
Beta	1890	18.4		1980	pCi/L	REC:	104 (75%-125%)		
	Uncert:	+/-1.21		+/-68.6					
	TPU:	+/-3.32		+/-330					
QC1203961281 442240023 MSD									
Alpha	483	3.75		462	pCi/L	REC:	95 (75%-125%)		01/31/1818:03
	Uncert:	+/-1.23		+/-48.8		RPD:	14 (0%-20%)		
	TPU:	+/-1.38		+/-91.1		RER:	0.984 (0-2)		
Beta	1890	18.4		1830	pCi/L	REC:	96 (75%-125%)		
	Uncert:	+/-1.21		+/-64.9		RPD:	8 (0%-20%)		
	TPU:	+/-3.32		+/-305		RER:	0.662 (0-2)		
QC1203961282 LCS									
Alpha	80.6			77.5	pCi/L	REC:	96 (80%-120%)		02/01/1809:42
	Uncert:			+/-7.40					
	TPU:			+/-15.0					
Beta	314			330	pCi/L	REC:	105 (80%-120%)		
	Uncert:			+/-11.4					
	TPU:			+/-56.3					
Rad Liquid Scintillation									
Batch 1734178									
QC1203958793 MB									
Tritium			U	-11.7	pCi/L			BXM4	01/29/1819:49
	Uncert:			+/-166					
	TPU:			+/-166					
QC1203958794 441685007 DUP									
Tritium		3500		3420	pCi/L				01/29/1820:40
	Uncert:	+/-286		+/-286		RPD:	2 (0%-20%)		
	TPU:	+/-734		+/-721		RER:	0.142 (0-2)		
QC1203958795 441685007 MS									
Tritium	4330	3500		8010	pCi/L	REC:	104 (75%-125%)		01/29/1821:32
	Uncert:	+/-286		+/-602					
	TPU:	+/-734		+/-1660					
QC1203958796 LCS									
Tritium	2160			2080	pCi/L	REC:	96 (80%-120%)		01/29/1822:23
	Uncert:			+/-246					
	TPU:			+/-472					
Batch 1735972									
QC1203963256 MB									
Technetium-99			U	-35.7	pCi/L			CXS7	02/13/1807:17

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Parmname	NOM	Sample	Qual	QC	Units	QC Criteria	Range	Analyst	Date Time
Rad Liquid Scintillation									
Batch 1735972									
	Uncert:			+/-23.4					
	TPU:			+/-23.4					
**Technetium-99m Tracer	38500			36900	CPM	REC: 96	(30%-105%)		
QC1203963257 442156001 DUP									
Technetium-99		147		114	pCi/L				02/13/1815:19
	Uncert:	+/-27.8		+/-27.7		RPD: 25	(0% - 100%)		
	TPU:	+/-32.2		+/-30.5		RER: 1.45	(0-2)		
**Technetium-99m Tracer	38500	38900		36600	CPM	REC: 95	(30%-105%)		
QC1203963258 LCS									
Technetium-99	888			749	pCi/L	REC: 84	(80%-120%)		02/13/1807:51
	Uncert:			+/-48.2					
	TPU:			+/-96.1					
**Technetium-99m Tracer	38500			35500	CPM	REC: 92	(30%-105%)		

Notes:

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

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
<	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).
B	The analyte was detected in the associated method blank >/= MDC or >5% sample activity.
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.
UX	Gamma Spectroscopy--Uncertain identification
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

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Parmname	NOM	Sample	Qual	QC	Units	QC Criteria	Range	Analyst	Date	Time

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.
** Indicates analyte is a surrogate compound.
^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptence 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.
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.