TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
Tel: (314)298-8566

TestAmerica Job ID: 160-26405-1
TestAmerica Sample Delivery Group: SL2792
Client Project/Site: S18-001/X18-005/A18-001/I18-004/W18-001

For:
CH2M Hill Plateau Remediation Company
PO BOX 1600, MS H8-41
Richland, Washington 99352

Attn: Mr. Scot Fitzgerald

Authorized for release by:
2/19/2018 3:46:21 PM

Jayna Awalt, Project Manager II
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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Job ID: 160-26405-1

Laboratory: TestAmerica St. Louis

Narrative

CASE NARRATIVE

CH2MHill Plateau Remediation Company
P.O. Box 1600
Richland, Washington 99352
February 19, 2018
Attention: Scot Fitzgerald

SDG	: SL2792
Number of Samples	: 21 samples
Sample Matrix	: Water
Data Deliverable	: Summary
Date SDG Closed	: January 19, 2018

II. Introduction

On January 18 and 19, 21 samples were received by TestAmerica - St. Louis for analysis. The samples were received within temperature criteria. See the COC and receipt checklists for documentation of any variations on receipt conditions and temperature. Upon receipt, samples were given laboratory Ids to correspond with specific client Ids. Please refer to the Sample Summary sheets attached to this case narrative. This report is incomplete without the narrative.

The following SAFs are associated with this SDG: S18-001, X18-005, A18-001, I18-004, and W18-001

Walk-in cooler #3 fell below temp criteria on 1/25/18. The TOX sample bottle for B3FRP8 was found to be frozen and broken. There i sufficient volume in the TOC bottle to run TOX analysis. All remaining samples were not affected. Per SIR18-0434, TOC portion will be used for TOX analysis.

III. Analytical Results/ Methodology

The analytical results for this report are presented by analytical test. Each set of data includes sample identification information, analytical results and the appropriate detection limits. All results are based upon samples as they were received, i.e. wet weight, unless otherwise noted on the data sheets. See the attached Methods Summary Form for the methods used in this SDG.

MS/MSD/Dup analysis was done per the client requirements. Analytical batches that did not contain matrix QC were analyzed with an LCS/LCS duplicate.

Note: For Metals analyses, per standard practice, all 6020 water and soil samples are initially prepared at 2x dilution. This standard dilution does not affect reporting limits as MDL studies are also prepared in the same manner. These dilutions do not necessitate a narrative note; however, they are flagged “D” due to a limitation in the LIMS.

For solid matrices, all Metals analyses (including Hg) use a Standard Reference Material for the Laboratory Control Sample (LCS). Certificate for this source material may be obtained from TASL.

For Anion analysis, samples have been started at a 2x dilution per CHPRC direction. The samples are flagged accordingly with a “D” flag if sample concentration is above the MDL/RL. Non-conformance will be included in the below section only if dilution is greater than 2x.

For WTPH methods, the lab utilizes method 8015B. Per CHPRC direction, the method name in the electronic data has been modified to read WTPH in the place of 8015B.

Per CHPRC direction, due to the short hold times for Nitrate, Nitrite and Phosphate by IC (48 hours) as well as pH analysis (24 hours), a SIR request is not needed when samples are run outside 1x hold but within 2x hold. A narrative comment will be included below if a sample is run outside the lab-specified hold time for waters.

Job ID: 160-26405-1 (Continued)

Laboratory: TestAmerica St. Louis (Continued)

For extractable and volatile organic analyses, several analytes are considered poor performers and will not meet CHPRC QC limits. Per CHPRC direction, the lab's statistical limits have been reported. Excursions outside these statistical limits will include a non-conformance in the sections below.

IV. Definitions

QCBLK-	Quality Control Blank, Method Blank
QCLCS-	Quality Control Laboratory Control Sample, Blank Spike
DUP-	Laboratory Duplicate
MS-	Matrix Spike
MSD-	Matrix Spike Duplicate

The term "Detection Limit" used in the analytical data report refers to either the lab's standard reporting limits or contractually required reporting limits, whichever is applicable.

The following data qualifiers may be applicable to the results in this report, as appropriate.

- **B** - For inorganic analyses, the sample result is greater than the MDL but less than the RL.
- **B** - For organic analyses, Method Blank contamination. The Method Blank contains the target analyte above the MDL/RL and Method Blank is greater than 5% of the sample concentration.
- **B** - For inorganics and radiochemistry, Method Blank reported above the MDC/MDL.
- **J** - For organic analyses, the sample is estimated and less than the RL. If on Method Blank, indicates Method Blank contamination.
- **C** - For inorganic analyses, Method Blank contamination. The Method Blank contains the target analyte at a concentration above the MDL/RL and Method Blank concentration is greater than 5% of the sample concentration.
- **D** - For all analyses, the sample result was obtained from the analysis of a dilution. For ICPMS Metals analyses, per standard practice, all samples are initially prepared at a 2x dilution. This standard dilution does not affect reporting limits as MDL studies are also prepared in the same manner and will not be narrated below. Only dilutions above 2x will be narrated and considered a true dilution for these samples.
- **N** - For inorganics, rad and GC analyses, the spike/spike duplicate recoveries are outside QC limits.
- **T** - For GCMS analyses, the spike/spike duplicate recoveries are outside QC limits.
- **o** - For all analyses, the LCS (LCSD) recoveries are outside QC limits.
- **P -** For organic analyses (PCB/Pests only), the aroclor target analyte has greater than 25% difference for detected concentrations between the two GC columns.
- **X-** Organics and Anions IC - Sample concentration over calibration and/or surrogate recovery outside QC limits.
- **X-** Inorganics - The analyte present in the original sample is > 4x the spike concentration.
- **X-** Radiochemistry - Carrier or Tracer recovery is outside limits.
- **Z-** Sample was prepped or analyzed beyond the specified sample holding time.
- **y -** RPD is outside established limits.

Volatiles

Batch: 348666

The following compounds did not meet the minimum relative response factor limits in the continuing calibration verification (CCV) associated with batch analytical batch 160-348666: 2-Butanone and Acetone. A low level CCV was analyzed at the base reporting limit of 1ug/L and the affected analytes were detected. Affected target analytes recovering above the reporting limit in the associated samples will be qualified and reported. (CCVIS 160-348666/2)

The matrix spike / matrix spike duplicate (MS/MSD) precision for analytical batch 160-348666 was outside control limits for Acetone. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) precision was within acceptance limits. (160-26405-A-8 MS) and (160-26405-A-8 MSD)

ICPMS Metals

Job ID: 160-26405-1 (Continued)

Laboratory: TestAmerica St. Louis (Continued)

Batch: 348796

Copper was detected in method blank MB 160-347310/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged “B”. If the associated sample reported a result above the MDL and/or RL and MB is greater than 5% the sample concentration, the result has been flagged “C”.

The low level check (CCVL) was outside the upper QC limits for Cadmium. Associated samples which are below the reporting limit for the contaminant do not require re-analysis. Original results are reported. (CCVL 160-348796/51)

The initial calibration verification (ICV) result for batch analytical batch 160-348796 was above the upper control limit for Selenium. Sample results were below the reporting limit, and have been reported as qualified data. (ICV 160-348796/8)

The low level check (CCVL) was outside the upper QC limits for Selenium. Associated samples which are below the reporting limit for the contaminant do not require re-analysis. Original results are reported. (CCVL 160-348796/68)

The continuing calibration verification (CCV) associated with analytical batch 160-348796 recovered above the upper control limit for Selenium. The samples associated with this CCV were below the reporting limit for the affected analytes; therefore, the data have been reported. The following sample is impacted: (CCV 160-348796/39).

TOX

Batch: 350465

TOX was detected in method blank MB 160-350461/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged “B”. If the associated sample reported a result above the MDL and/or RL and MB is greater than 5% the sample concentration, the result has been flagged “C”.

The following samples in TOX analytical batch 160-350465 were bracketed by a continuing calibration blank (CCB) that recovered above the reporting limit of 5 ug/L (6.67 ug/L): B3FV04 (160-26418-7), B3FV05 (160-26418-8) and B3FV06 (160-26418-9). These samples are reported with TOX values above the reporting limit of 5 ug/L, as the samples cannot be re-prepped due to significant headspace now in the sample bottles.

The following samples in TOX analytical batch 160-350465 exhibited bottom column results greater than 10% of the combined sum of the top and bottom columns: B3FV05 (160-26418-8) and B3FV06 (160-26418-9). However, the results are not believed to be adversely affected, as the columns were not over-loaded. Thus, this excursion is attributed to normal column channeling and results may be reported, per method 9020B.

Tritium

Prep Batch: 347320

The matrix spike (MS) has a spike recovery (-81%) below the QC limit (67%-130%/75%-125%). The tritium concentration in the original sample is greater than five (5) times the amount spiked, making the percent recovery information statistically invalid and therefore could not be evaluated for accuracy and precision. The data have been reported. B3FXJ3 (160-26405-2), B3FXJ2 (160-26405-5), B3FWF7 (160-26418-3), (LCS 160-347320/2-A), (MB 160-347320/1-A), (160-26404-C-9-A), (160-26404-C-9-B DU), (160-26404-A-18-A) and (160-26404-A-18-B MS)

Strontium

Prep Batch: 347306

Insufficient sample volume was available to perform a sample duplicate (DU). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) was prepared to demonstrate batch precision. B3FXJ3 (160-26405-2) and B3FXJ2 (160-26405-5)

The method blank (MB) has a strontium carrier recovery (39.6%) below the 40% QC limit. The method blank activity is below the MDC/RL

Job ID: 160-26405-1 (Continued)

Laboratory: TestAmerica St. Louis (Continued)

indicating this anomaly did not negatively impact the results reported. During preparation of sample, the planchette was dropped when removing from the desiccator. Insufficient sample volume was available to perform re-extraction. The data have been reported with this narrative. B3FXJ3 (160-26405-2), B3FXJ2 (160-26405-5), (LCS 160-347306/2-A), (LCSD 160-347306/3-A) and (MB 160-347306/1-A)

Technetium-99

Prep Batch: 348968

Insufficient sample volume was available to perform a sample duplicate (DUP). A laboratory control sample duplicate (LCS/LCSD) was preformed to display batch precision.

The detection goal of 3.00 pCi/L was not met for the following samples due to a shortened count time attributed to high activity: B3FY19 (160-26418-1). Analytical results are reported with the MDC achieved.

There were no observations or non-conformances associated with the following methods:

Semivolatiles
ICP Metals
Mercury
Alkalinity
TOC

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

Reviewed and approved:

Jayna Awalt
St. Louis Project Manager

SAMPLE ISSUE RESOLUTION (SIR) REPORT

SIR Number: SIR18-0434
Rev. Number: 0
Date Initiated: 01/26/2018

SAMPLE EVENT INFORMATION

SAF NUM(S): W18-001

LABORATORY: TASL

SAMPLING INFORMATION

NUMBER OF SAMPLES: 1

SAMPLE NUMBERS: B3FRP8

SAMPLE MATRIX: WATER

SDG NUM(S): SL2792

ISSUE BACKGROUND

CLASS: Laboratory Issue

TYPE: Incorrect Sample Preservation

DESCRIPTION: Walk in cooler #3 fell below temp on 1/25/17. The TOX sample bottle was found to be frozen and broken. Samples not included were either already completed or remained in their liquid or solid form. The software did not send out an alert which is being investigated. Samples were removed from this cooler and placed in another cooler. There is sufficient volume in TOC bottle to run TOX.

RESOLUTION

PROPOSED RESOLUTION: TASL PROPOSES TO CONTINUE WITH ANALYSIS AND NARRATE.

FINAL RESOLUTION: Please proceed with the TOX analysis and narrate the issue.

SUBMITTED BY:

AWALT, JK 01/26/2018

ACCEPTED BY:

MEDLEY, HA 01/29/2018

Login Sample Receipt Checklist

Client: CH2M Hill Plateau Remediation Company

Job Number: 160-26405-1
SDG Number: SL2792

Login Number: 26405
List Number: 1
Creator: Clarke, Jill C

List Source: TestAmerica St. Louis

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.3, 1.4
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # S18-001-339

Collector: Dan Woehle CHPRC SL2792	**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 -97-44	**Ice Chest No.:** GWS-748	
Shipped To (Lab): TestAmerica St. Louis	**Method of Shipment** Commercial Carrier	**Bill of Lading/Air Bill No.:** 771251049960	
Protocol SURV	**Priority:** 30 Days	**Offsite Property No.:** N/A	

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
B3FWC3	Y	W	1-18-18	0725	1x500-mL G/P	6020_METALS_ICPMS: Chromium (1)	6 Months	HNO3 to pH <2
B3FXJ3	N	W	1-18-18	0725	1x500-mL G/P	6020_METALS_ICPMS: Chromium (1)	6 Months	HNO3 to pH <2
B3FXJ3	N	W	1-18-18	0725	1x1-L G/P	SRISO_SEP_PRECIP_GPC: COMMON	6 Months	HNO3 to pH <2
B3FXJ3	N	W	1-18-18	0725	1x250-mL P	906.0_TRITIUM_LSC: COMMON	6 Months	None

Relinquished By: Dan Woehle CHPRC — Print First and Last Name; Signature; JAN 18 2018 1030 — Date/Time	Received By: Frank Hall /CHPRC — Print First and Last Name; Signature; JAN 18 2018 1030 — Date/Time
Relinquished By: Frank Hall /CHPRC — Print First and Last Name; Signature; JAN 18 2018 1400 — Date/Time	Received By: FEDEX — Print First and Last Name; Signature; Date/Time
Relinquished By: Fed Ex — Print First and Last Name; Signature; Date/Time	Received By: Jill Clark — Print First and Last Name; Signature; 1.19.18 0920 — 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	C.O.C. # S18-001-362 Page 1 of 1

Collector:	Larry Rosane /CHPRC SL2792	**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 98/29	**Ice Chest No.:**	GWS-748
Shipped To (Lab):	TestAmerica St. Louis	**Method of Shipment**	Commercial Carrier	**Bill of Lading/Air Bill No.:**	7712 5104 9960
Protocol	SURV	**Priority:**	30 Days	**Offsite Property No.:**	N/A

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
B3FY22	N	W	1-17-18	0857	1x500-mL P	TC99_SEP_LSC: COMMON	6 Months	HNO3 to pH <2

Relinquished By:	Received By:
Larry Rosane /CHPRC — Larry Rosane — JAN 17 2018 1225 (Print First and Last Name / Signature / Date/Time)	SSU-1 — JAN 17 2018 1225 (Print First and Last Name / Signature / Date/Time)
SSU-1 — JAN 18 2018 0700 (Print First and Last Name / Signature / Date/Time)	Lesly Wall /CHPRC — Lesly Wall — JAN 18 2018 0700 (Print First and Last Name / Signature / Date/Time)
Lesly Wall /CHPRC — Lesly Wall — JAN 18 2018 1400 (Print First and Last Name / Signature / Date/Time)	FEDEX (Print First and Last Name / Signature / Date/Time)
Fed Ex (Print First and Last Name / Signature / Date/Time)	Jill Clarke — Jill Clarke — 1-19-18 0920 (Print First and Last Name / Signature / Date/Time)

Matrix *

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

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

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CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # S18-001-340

Collector:	Dan Woehle CHPRC SL2392	**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 -97-44	**Ice Chest No.:**	GWS-748
Shipped To (Lab):	TestAmerica St. Louis	**Method of Shipment**	Commercial Carrier	**Bill of Lading/Air Bill No.:**	771251049960
Protocol	SURV	**Priority:**	30 Days	**Offsite Property No.:**	N/A

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
B3FWC4	Y	W	1-18-18	1021	1x500-mL G/P	6020_METALS_ICPMS: Chromium (1)	6 Months	HNO3 to pH <2
B3FXJ2	N	W	1-18-18	1021	1x500-mL G/P	6020_METALS_ICPMS: Chromium (1)	6 Months	HNO3 to pH <2
B3FXJ2	N	W	1-18-18	1021	1x1-L G/P	SRISO_SEP_PRECIP_GPC: COMMON	6 Months	HNO3 to pH <2
B3FXJ2	N	W	1-18-18	1021	1x250-mL P	906.0_TRITIUM_LSC: COMMON	6 Months	None

Relinquished By: Dan Woehle CHPRC	JAN 18 2018 1030	Received By: Frank Hall JCHPRC	JAN 18 2018 1030	Matrix *	
Print First and Last Name / Signature	Date/Time	Print First and Last Name / Signature	Date/Time	S = Soil	DS = Drum Solids
Relinquished By: Frank Hall JCHPRC 1.18.18	JAN 18 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: Fed EX		Received By: Jill Clarke	1.19.18 0920	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:

02/19/18

REV.0

1160 2/19/20

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # S18-001-372

Collector:	Dan Woehle CHPRC SL2792	**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-506-98(8)	**Ice Chest No.:**	GWS-748
Shipped To (Lab):	TestAmerica St. Louis	**Method of Shipment**	Commercial Carrier	**Bill of Lading/Air Bill No.:**	7712 5104 9960
Protocol	SURV	**Priority:**	30 Days	**Offsite Property No.:**	N/A

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
B3FYH2	N	W	JAN 17 2018	1220	1x500-mL G/P	6010_METALS_ICP: GW 04; 6020_METALS_ICPMS: GW 01	6 Months	HNO3 to pH <2
B3FX59	Y	W	↓	↓	1x500-mL G/P	6010_METALS_ICP: GW 04; 6020_METALS_ICPMS: GW 01	6 Months	HNO3 to pH <2

Relinquished By:	Received By:
Dan Woehle CHPRC — JAN 17 2018 1420 (Print First and Last Name / Signature / Date/Time)	SSU-1 — JAN 17 2018 1420 (Print First and Last Name / Signature / Date/Time)
SSU-1 — JAN 18 2018 0700 (Print First and Last Name / Signature / Date/Time)	Lesly Wall CHPRC — JAN 18 2018 0700 (Print First and Last Name / Signature / Date/Time)
Lesly Wall CHPRC — JAN 18 2018 1400 (Print First and Last Name / Signature / Date/Time)	FEDEX (Print First and Last Name / Signature / Date/Time)
Fed Ex (Print First and Last Name / Signature / Date/Time)	Jill Clarke — 1.19.18 0950 (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

C.O.C. # X18-005-172

Collector:	Larry Rosane /CHPRC SL2792	**Contact/Requester:**	WATERS-HUSTED, K	**Telephone No.:**	376-4650
SAF No.:	X18-005	**Sampling Origin:**	Hanford Site	**Purchase Order/Charge Code:**	300071
Project Title:	Groundwater Background Study,	**Logbook No.:**	HNF-N-506 98/29	**Ice Chest No.:**	GWS-731
Shipped To (Lab):	TestAmerica St. Louis	**Method of Shipment**	Commercial Carrier	**Bill of Lading/Air Bill No.:**	7712 5109 9060
Protocol	SURV	**Priority:**	30 Days	**Offsite Property No.:**	N/A

POSSIBLE SAMPLE HAZARDS/REMARK
*Contains Radioactive Material at concentrations that are not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.

SPECIAL INSTRUCTIONS
Batch with A, I, S, and W SAFs.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B3HLB3	N	W	1-18-18	0905	5x40-mL aGs*	8260_VOA_GCMS: COMMON	14 Days	HCl or H2SO4 to pH <2 / Cool <=6C

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	Larry Rosane	JAN 18 2018 1000	SSU-1	SSU-1		JAN 18 2018 1000
SSU-1	SSU-1		JAN 18 2018 1150	Frank Hall /CHPRC	Frank Hall		JAN 18 2018 1150
Frank Hall /CHPRC	Frank Hall		JAN 18 2018 1400	FEDEX	FEDEX		
	Fed EX		1350		Jill Clark	Jill Clark	1-19-18 0920

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:

02/19/18 REV.0

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FedEx is closely monitoring the winter storms across the U.S. Learn More

FedEx ® Tracking

771251049960

Ship date:
Thu 1/18/2018

Richland, WA US

Delivered
Signed for by: J.CLARKE

Actual delivery:
Fri 1/19/2018 9:13 am

EARTH CITY, MO US

Travel History

Date/Time	Activity	Location
1/19/2018 - Friday		
9:13 am	Delivered	EARTH CITY, MO
8:17 am	In transit	MEMPHIS, TN
8:11 am	In transit	MEMPHIS, TN
8:11 am	In transit	MEMPHIS, TN
7:13 am	On FedEx vehicle for delivery	EARTH CITY, MO
7:06 am	At local FedEx facility	EARTH CITY, MO
6:00 am	At destination sort facility	BERKELEY, MO
5:10 am	Departed FedEx location	MEMPHIS, TN
12:56 am	Arrived at FedEx location	MEMPHIS, TN
1/18/2018 - Thursday		
4:50 pm	Left FedEx origin facility	PASCO, WA
3:16 pm	Picked up	PASCO, WA
2:46 pm	Shipment information sent to FedEx	

Shipment Facts

Tracking Number	771251049960	**Service**	FedEx Standard Overnight
Weight	75 lbs / 34.02 kgs	**Delivered To**	Shipping/Receiving
Total pieces	1	**Total shipment weight**	75 lbs / 34.02 kgs
Terms	Recipient	**Shipper reference**	GWS-748
Packaging	Your Packaging	**Special handling section**	Deliver Weekday, Additional Handling Surcharge
Standard transit	1/19/2018 by 3:00 pm		

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FedEx ® Tracking

771251099060

Ship date:
Thu 1/18/2018

Richland, WA US

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Signed for by: J.CLARKE

Actual delivery:
Fri 1/19/2018 9:13 am

EARTH CITY, MO US

Travel History

Date/Time	Activity	Location
- 1/19/2018 - Friday		
9:13 am	Delivered	EARTH CITY, MO
8:17 am	In transit	MEMPHIS, TN
8:11 am	In transit	MEMPHIS, TN
8:11 am	In transit	MEMPHIS, TN
7:14 am	On FedEx vehicle for delivery	EARTH CITY, MO
7:07 am	At local FedEx facility	EARTH CITY, MO
6:00 am	At destination sort facility	BERKELEY, MO
5:10 am	Departed FedEx location	MEMPHIS, TN
12:56 am	Arrived at FedEx location	MEMPHIS, TN
- 1/18/2018 - Thursday		
4:50 pm	Left FedEx origin facility	PASCO, WA
3:16 pm	Picked up	PASCO, WA
2:46 pm	Shipment information sent to FedEx	

Shipment Facts

Tracking Number	771251099060	**Service**	FedEx Standard Overnight
Weight	80 lbs / 36.29 kgs	**Delivered To**	Shipping/Receiving
Total pieces	1	**Total shipment weight**	80 lbs / 36.29 kgs
Terms	Recipient	**Shipper reference**	GWS-731
Packaging	Your Packaging	**Special handling section**	Deliver Weekday
Standard transit	1/19/2018 by 3:00 pm		

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Login Sample Receipt Checklist

Client: CH2M Hill Plateau Remediation Company

Job Number: 160-26418-1
SDG Number: SL2792

Login Number: 26418
List Number: 1
Creator: Taylor, Kristene N

List Source: TestAmerica St. Louis

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.0
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # A18-001-064

Page 1 of 1

Collector:	Larry Rosane /CHPRC SL2792	**Contact/Requester:**	Karen Waters-Husted	**Telephone No.:**	509-376-4650
SAF No.:	A18-001	**Sampling Origin:**	Hanford Site	**Purchase Order/Charge Code:**	300071
Project Title:	PERFORMANCE ASSESSMENT, JANUAR	**Logbook No.:**	HNF-N-506 96/80	**Ice Chest No.:**	GWS-744
Shipped To (Lab):	TestAmerica St. Louis	**Method of Shipment**	Commercial Carrier	**Bill of Lading/Air Bill No.:**	7712 2110 5186
Protocol	Monitoring	**Priority:**	30 Days	**Offsite Property No.:**	N/A

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
B3FY19	N	W	1-15-18	1244	1x500-mL G/P	TC99_SEP_LSC: COMMON	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
Larry Rosane /CHPRC	Larry Rosane	Larry Rosane	JAN 15 2018 1320	Troy Bacon CHPRC	Troy L. Bacon	Troy L. Bacon	JAN 15 2018 1320 1-15-18
Troy Bacon CHPRC	Troy L. Bacon	Troy L. Bacon	JAN 15 2018 1400	FEDEX			
FEDEX					Robert Castillo	Robert Castillo	1-18-18 1000

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 = FSR55813 A-6004-842 (REV 3)

02/19/18

REV.0

17560 2/19/2018

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # I18-004-073 Page 1 of 1

Collector: Larry Rosane CHPRC SL2792	**Contact/Requester:** Karen Waters-Husted	**Telephone No.:** 509-376-4650
SAF No.: I18-004	**Sampling Origin:** Hanford Site	**Purchase Order/Charge Code:** 300071
Project Title: SURV18, JANUARY 2018	**Logbook No.:** HNF-N-506 96/80	**Ice Chest No.:** GWS-744
Shipped To (Lab): TestAmerica St. Louis	**Method of Shipment** Commercial Carrier	**Bill of Lading/Air Bill No.:** 7712 2110 5180
Protocol SURV	**Priority:** 30 Days	**Offsite Property No.:** N/A

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
B3FPN0	N	W	1-15-18	1211	1x500-mL G/P	TC99_SEP_LSC: COMMON	6 Months	HNO3 to pH <2

Relinquished By	Received By
Larry Rosane CHPRC — Print First and Last Name / Signature / Date/Time: JAN 15 2018 1320	Troy Bacon CHPRC — Print First and Last Name / Signature / Date/Time: JAN 15 2018 1320
Troy Bacon CHPRC — Print First and Last Name / Signature / Date/Time: JAN 15 2018 1400	FEDEX — Print First and Last Name / Signature / Date/Time
FEDEX — Print First and Last Name / Signature / Date/Time	Print First and Last Name / Signature / Date/Time: 1-18-18 1601
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:

Printed On 11/21/2017 FSR ID = FSR53876 A-6004-842 (REV 3)

02/19/18

REV.0

18660 2/19/20

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # S18-001-101 Page 1 of 1

Collector:	Larry Rosane /CHPRC SL2792	**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 96/80	**Ice Chest No.:**	GWS-744
Shipped To (Lab):	TestAmerica St. Louis	**Method of Shipment**	Commercial Carrier	**Bill of Lading/Air Bill No.:**	7712 2110 5180
Protocol	SURV	**Priority:**	30 Days	**Offsite Property No.:**	N/A

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
B3FWF7	N	W	1-15-18	0918	1x250-mL P	906.0_TRITIUM_LSC: COMMON	6 Months	None

Relinquished By:	Received By:
Larry Rosane /CHPRC — Larry Rosane — JAN 15 2018 1105 (Print First and Last Name / Signature / Date/Time)	Roger Friesz Jr. /CHPRC — JAN 15 2018 1105 (Print First and Last Name / Signature / Date/Time)
Roger Friesz Jr. /CHPRC — JAN 15 2018 1400 (Print First and Last Name / Signature / Date/Time)	FEDEX (Print First and Last Name / Signature / Date/Time)
FEDEX (Print First and Last Name / Signature / Date/Time)	1-18-18 1100 (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 11/21/2017 FSR ID = FSR53834 A-6004-842 (REV 3)

02/19/18

REV.0

19960

2/19/201

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W18-001-380

Collector:	Larry Rosano CHPRC SL2792	**Contact/Requester:**	Karen Waters-Husted	**Telephone No.:**	509-376-4650
SAF No.:	W18-001	**Sampling Origin:**	Hanford Site	**Purchase Order/Charge Code:**	300071
Project Title:	RCRA, JANUARY 2018	**Logbook No.:**	HNF-N-506 98/25	**Ice Chest No.:**	GWS-744
Shipped To (Lab):	TestAmerica St. Louis	**Method of Shipment**	Commercial Carrier	**Bill of Lading/Air Bill No.:**	7712 2110 5180
Protocol	RCRA	**Priority:**	30 Days	**Offsite Property No.:**	N/A

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
B3FTN1	Y	W	1-11-18	1215	1x500-mL G/P	7470_MERCURY_CV: COMMON (AQUEOUS); 6020_METALS_ICPMS: GW 01; 6010_METALS_ICP: GW 04	28 Days	HNO3 to pH <2
B3FYC9	N	W	↓	↓	1x250-mL G/P	310.1_ALKALINITY: COMMON	14 Days	Cool <=6C
B3FYC9	N	W	1-11-18	1215	1x500-mL G/P	7470_MERCURY_CV: COMMON (AQUEOUS); 6020_METALS_ICPMS: GW 01; 6010_METALS_ICP: GW 04	28 Days	HNO3 to pH <2

Relinquished By	Print First and Last Name	Signature	Date/Time	Received By	Print First and Last Name	Signature	Date/Time
Larry Rosano CHPRC	Larry Rosano		JAN 11 2018 1345	SSU-1			JAN 11 2018 1345
SSU-1			JAN 15 2018 0900	Troy Bacon CHPRC	Troy L. Bacon		JAN 15 2018 0900
Troy Bacon CHPRC	Troy L. Bacon		JAN 15 2018 1400	FEDEX			
FEDEX				Richard Clifford			1-18-18 1600

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 = FSR55830 A-6004-842 (REV 3)

CH2MHill Plateau Remediation Company

LL LBS.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W18-001-250

Collector: Barbara Briggs /CHPRC SL2792	**Contact/Requester:** Karen Waters-Husted	**Telephone No.:** 509-376-4650
SAF No.: W18-001	**Sampling Origin:** Hanford Site	**Purchase Order/Charge Code:** 300071 RW. 1/16/18
Project Title: RCRA, JANUARY 2018	**Logbook No.:** HNF-N-506 -95 pg 78	**Ice Chest No.:** 6WS-730 390
Shipped To (Lab): TestAmerica St. Louis	**Method of Shipment** Commercial Carrier	**Bill of Lading/Air Bill No.:** 7712 2684 9313
Protocol RCRA	**Priority:** 30 Days	**Offsite Property No.:** N/A

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
B3FRH8	N	W	1/15/18	1348	1x250-mL G/P	310.1_ALKALINITY: GW 01	14 Days	Cool <=6C
B3FRH8	N	W			4x1-L aG	8270_PHENOLIC_GC: COMMON	7/40 Days	Cool <=6C
B3FRH8	N	W			1x1-L aGs*	9020_TOX: COMMON	28 Days	H2SO4 to pH <2 / Cool <=6C
B3FRH8	N	W			1x250-mL aG	9060_TOC: COMMON	28 Days	HCl or H2SO4 to pH <2 / Cool <=6C
B3FV04	N	W			1x1-L aGs*	9020_TOX: COMMON	28 Days	H2SO4 to pH <2 / Cool <=6C
B3FV04	N	W			1x250-mL aG	9060_TOC: COMMON	28 Days	HCl or H2SO4 to pH <2 / Cool <=6C
B3FV05	N	W	1/15/18	1348	1x1-L aGs*	9020_TOX: COMMON	28 Days	H2SO4 to pH <2 / Cool <=6C

Relinquished By:	Received By:
Barbara Briggs /CHPRC — Print First and Last Name; Signature; JAN 1 5 2018 1445 — Date/Time	SSU-1 — Print First and Last Name; Signature; JAN 1 5 2018 1445 — Date/Time
SSU-1 — Print First and Last Name; Signature; JAN 1 6 2018 0700 — Date/Time	Lesly Wall /CHPRC — Print First and Last Name; Signature; JAN 1 6 2018 0700 — Date/Time
Lesly Wall /CHPRC — Print First and Last Name; Signature; JAN 1 6 2018 1400 — Date/Time	FEDEX — Print First and Last Name; Signature; Date/Time
FEDEX — Print First and Last Name; Signature; Date/Time	Robert Castillo — Print First and Last Name; Signature; 1-18-18 1000 — 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 = FSR54156 A-6004-842 (REV 3)

02/19/18

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2/19/2018

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W18-001-250

Collector:	Barbara Briggs /CHPRC SL2792	**Contact/Requester:**	Karen Waters-Husted	**Telephone No.:**	509-376-4650
SAF No.:	W18-001	**Sampling Origin:**	Hanford Site	**Purchase Order/Charge Code:**	300071 RW. 1/16/18
Project Title:	RCRA, JANUARY 2018	**Logbook No.:**	HNF-N-506 -95 pg. 78	**Ice Chest No.:**	GWS-930390
Shipped To (Lab):	TestAmerica St. Louis	**Method of Shipment**	Commercial Carrier	**Bill of Lading/Air Bill No.:**	7712 2684 8313
Protocol	RCRA	**Priority:**	30 Days	**Offsite Property No.:**	N/A

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
B3FV05 /	N	W	1/15/18	1348	1x250-mL aG	9060_TOC: COMMON	28 Days	HCl or H2SO4 to pH <2 / Cool <=6C
B3FV06 /	N	W	|	|	1x1-L aGs*	9020_TOX: COMMON	28 Days	H2SO4 to pH <2 / Cool <=6C
B3FV06 /	N	W	1/15/18	1348	1x250-mL aG	9060_TOC: COMMON	28 Days	HCl or H2SO4 to pH <2 / Cool <=6C

Relinquished By:	Received By:
Barbara Briggs /CHPRC — Print First and Last Name — Signature — JAN 1 5 2018 1445 — Date/Time	SSU-1 — Print First and Last Name — Signature — JAN 1 5 2018 1445 — Date/Time
SSU-1 — Print First and Last Name — Signature — JAN 1 6 2018 0700 — Date/Time	Lesly Wall /CHPRC — Print First and Last Name — Signature — JAN 1 6 2018 0700 — Date/Time
Lesly Wall /CHPRC — Print First and Last Name — Signature — JAN 1 6 2018 1400 — Date/Time	FEDEX — Print First and Last Name — Signature — Date/Time
FEDEX — Print First and Last Name — Signature — Date/Time	Robert Castillo — Print First and Last Name — Signature — 1-18-18 1400 — 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 = FSR54156 A-6004-842 (REV 3)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W18-001-252

Collector: IVAN SCHAEFFER CHPRC SL2792	**Contact/Requester:** Karen Waters-Husted	**Telephone No.:** 509-376-4650
SAF No.: W18-001	**Sampling Origin:** Hanford Site	**Purchase Order/Charge Code:** 300071
Project Title: RCRA, JANUARY 2018	**Logbook No.:** HNF-N-506-96182	**Ice Chest No.:** GWS-738
Shipped To (Lab): TestAmerica St. Louis	**Method of Shipment** Commercial Carrier	**Bill of Lading/Air Bill No.:** 771240284271
Protocol RCRA	**Priority:** 30 Days	**Offsite Property No.:** N/A

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
B3FRK0	N	W	1-17-18	0959	1x1-L aGs*	9020_TOX: COMMON	28 Days	H2SO4 to pH <2 / Cool <=6C
B3FRK0	N	W			1x250-mL aG	9060_TOC: COMMON	28 Days	HCl or H2SO4 to pH <2 / Cool <=6C
B3FRP9	N	W			1x1-L aGs*	9020_TOX: COMMON	28 Days	H2SO4 to pH <2 / Cool <=6C
B3FRP9	N	W			1x250-mL aG	9060_TOC: COMMON	28 Days	HCl or H2SO4 to pH <2 / Cool <=6C
B3FRP8	N	W			1x1-L aGs*	9020_TOX: COMMON	28 Days	H2SO4 to pH <2 / Cool <=6C
B3FRP8	N	W			1x250-mL aG	9060_TOC: COMMON	28 Days	HCl or H2SO4 to pH <2 / Cool <=6C
B3FRR0	N	W	1-17-18	0959	1x1-L aGs*	9020_TOX: COMMON	28 Days	H2SO4 to pH <2 / Cool <=6C

Relinquished By: IVAN SCHAEFFER CHPRC	JAN 17 2018	1020	Received By: Troy Bacon CHPRC — JAN 17 2018 1020
Relinquished By: Troy Bacon CHPRC	JAN 17 2018	1400	Received By: FEDEX
Relinquished By: FEDEX			Received By: 1-18-18 1100
Relinquished By:			Received By:

Matrix *
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

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

Printed On 11/21/2017 FSR ID = FSR53898 A-6004-842 (REV 3)

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # W18-001-252 Page 2 of 2

Collector:	IVAN SCHAEFFER CHPRC SL2792	**Contact/Requester:**	Karen Waters-Husted	**Telephone No.:**	509-376-4650
SAF No.:	W18-001	**Sampling Origin:**	Hanford Site	**Purchase Order/Charge Code:**	300071
Project Title:	RCRA, JANUARY 2018	**Logbook No.:**	HNF-N-506 -96182	**Ice Chest No.:**	GWS-738
Shipped To (Lab):	TestAmerica St. Louis	**Method of Shipment**	Commercial Carrier	**Bill of Lading/Air Bill No.:**	771240284271
Protocol	RCRA	**Priority:**	30 Days	**Offsite Property No.:**	N/A

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
B3FRR0	N	W	1-17-18	0959	1x250-mL aG	9060_TOC: COMMON	28 Days	HCl or H2SO4 to pH <2 / Cool <=6C

Relinquished By:	Received By:
IVAN SCHAEFFER CHPRC — JAN 17 2018 1020 (Print First and Last Name / Signature / Date/Time)	Troy Bacon CHPRC — JAN 17 2018 1020 (Print First and Last Name / Signature / Date/Time)
Troy Bacon CHPRC — JAN 17 2018 1400 (Print First and Last Name / Signature / Date/Time)	FEDEX (Print First and Last Name / Signature / Date/Time)
FEDEX (Print First and Last Name / Signature / Date/Time)	1-18-18 1300 (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 11/21/2017 FSR ID = FSR53898 A-6004-842 (REV 3)

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FedEx ® Tracking

771221105180

Ship date:
Tue 1/16/2018

Richland, WA US

Delivered
Signed for by: K.TAYLOR

Actual delivery:
Thu 1/18/2018 9:51 am

EARTH CITY, MO US

Travel History

Date/Time	Activity	Location
1/18/2018 - Thursday		
9:51 am	Delivered	EARTH CITY, MO
7:06 am	On FedEx vehicle for delivery	EARTH CITY, MO
6:59 am	At local FedEx facility	EARTH CITY, MO
1/17/2018 - Wednesday		
11:06 pm	At destination sort facility	BERKELEY, MO
5:00 pm	Departed FedEx location	MEMPHIS, TN
4:29 am	In transit	MEMPHIS, TN
1:33 am	Arrived at FedEx location	MEMPHIS, TN
1/16/2018 - Tuesday		
4:51 pm	Left FedEx origin facility	PASCO, WA
3:17 pm	Picked up	PASCO, WA
1/15/2018 - Monday		
4:04 pm	Shipment information sent to FedEx	

Shipment Facts

Tracking Number	771221105180	**Service**	FedEx Standard Overnight
Weight	70 lbs / 31.75 kgs	**Delivered To**	Shipping/Receiving
Total pieces	1	**Total shipment weight**	70 lbs / 31.75 kgs
Terms	Recipient	**Shipper reference**	GWS-744
Packaging	Your Packaging	**Special handling section**	Deliver Weekday
Standard transit	1/17/2018 by 3:00 pm		

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FedEx ® Tracking

771226848313

Ship date:		Actual delivery:
Tue 1/16/2018		**Thu 1/18/2018 9:51 am**
Richland, WA US	**Delivered** *Signed for by: K.TAYLOR*	EARTH CITY, MO US

Travel History

Date/Time	Activity	Location
- 1/18/2018 - Thursday		
9:51 am	Delivered	EARTH CITY, MO
7:09 am	On FedEx vehicle for delivery	EARTH CITY, MO
7:02 am	At local FedEx facility	EARTH CITY, MO
- 1/17/2018 - Wednesday		
11:06 pm	At destination sort facility	BERKELEY, MO
5:00 pm	Departed FedEx location	MEMPHIS, TN
4:29 am	In transit	MEMPHIS, TN
1:33 am	Arrived at FedEx location	MEMPHIS, TN
- 1/16/2018 - Tuesday		
4:51 pm	Left FedEx origin facility	PASCO, WA
3:17 pm	Picked up	PASCO, WA
11:52 am	Shipment information sent to FedEx	

Shipment Facts

Tracking Number	771226848313	**Service**	FedEx Standard Overnight
Weight	66 lbs / 29.94 kgs	**Delivered To**	Shipping/Receiving
Total pieces	1	**Total shipment weight**	66 lbs / 29.94 kgs
Terms	Recipient	**Shipper reference**	GWS-390
Packaging	Your Packaging	**Special handling section**	Deliver Weekday
Standard transit	1/17/2018 by 3:00 pm		

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FedEx ® Tracking

771240284271

Ship date:		Actual delivery:
Wed 1/17/2018		**Thu 1/18/2018 9:51 am**
Richland, WA US	**Delivered** *Signed for by: K.TAYLOR*	EARTH CITY, MO US

Travel History

Date/Time	Activity	Location
- 1/18/2018 - Thursday		
9:51 am	Delivered	EARTH CITY, MO
8:21 am	On FedEx vehicle for delivery	EARTH CITY, MO
8:12 am	At local FedEx facility	EARTH CITY, MO
7:09 am	In transit	MEMPHIS, TN
6:48 am	At destination sort facility	BERKELEY, MO
6:37 am	In transit	MEMPHIS, TN
5:59 am	Departed FedEx location	MEMPHIS, TN
4:09 am	In transit	MEMPHIS, TN
12:29 am	Arrived at FedEx location	MEMPHIS, TN
- 1/17/2018 - Wednesday		
4:47 pm	Left FedEx origin facility	PASCO, WA
3:17 pm	Picked up	PASCO, WA
2:47 pm	Shipment information sent to FedEx	

Shipment Facts

Tracking Number	771240284271	**Service**	FedEx Standard Overnight
Weight	81 lbs / 36.74 kgs	**Delivered To**	Shipping/Receiving
Total pieces	1	**Total shipment weight**	81 lbs / 36.74 kgs
Terms	Recipient	**Shipper reference**	GWS-738
Packaging	Your Packaging	**Special handling section**	Deliver Weekday
Standard transit	1/18/2018 by 3:00 pm		

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Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
y	Duplicate analysis not within control limits.

GC/MS Semi VOA

Qualifier	Qualifier Description
U	Analyzed for but not detected.

Metals

Qualifier	Qualifier Description
D	The reported value is from a dilution.
X	See case narrative notes for explanation of the 'X' flag
U	Analyzed for but not detected.
B	Estimated result. Result is less than the RL, but greater than MDL
C	The analyte was detected in both the sample and the associated QC blank, and the sample concentration was </= 5X the blank concentration.

General Chemistry

Qualifier	Qualifier Description
U	Analyzed for but not detected.
C	The analyte was detected in both the sample and the associated QC blank, and the sample concentration was </= 5X the blank concentration.
B	Estimated result. Result is less than the RL, but greater than MDL

Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.
X	Carrier is outside acceptance limits.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Method Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: S18-001/X18-005/A18-001/I18-004/W18-001

TestAmerica Job ID: 160-26405-1
SDG: SL2792

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds (GC/MS)	SW846	TAL SL
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL SL
6010C	Metals (ICP)	SW846	TAL SL
6020A	Metals (ICP/MS)	SW846	TAL SL
7470A	Mercury (CVAA)	SW846	TAL SL
310.1	Alkalinity	MCAWW	TAL SL
9020B	Organic Halides, Total (TOX)	SW846	TAL SL
9060	Organic Carbon, Total (TOC)	SW846	TAL SL
906.0	Tritium, Total (LSC)	EPA	TAL SL
SR-03-RC	Total Beta Strontium (GFPC)	DOE	TAL SL
TC-02-RC	Technetium-99 (LSC)	DOE	TAL SL

Protocol References:

DOE = U.S. Department of Energy
EPA = US Environmental Protection Agency
MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.
SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Sample Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: S18-001/X18-005/A18-001/I18-004/W18-001

TestAmerica Job ID: 160-26405-1
SDG: SL2792

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
160-26405-1	B3FWC3	Water	01/18/18 07:25	01/19/18 09:20
160-26405-2	B3FXJ3	Water	01/18/18 07:25	01/19/18 09:20
160-26405-3	B3FY22	Water	01/17/18 08:57	01/19/18 09:20
160-26405-4	B3FWC4	Water	01/18/18 10:21	01/19/18 09:20
160-26405-5	B3FXJ2	Water	01/18/18 10:21	01/19/18 09:20
160-26405-6	B3FYH2	Water	01/17/18 12:30	01/19/18 09:20
160-26405-7	B3FX59	Water	01/17/18 12:30	01/19/18 09:20
160-26405-8	B3HLB3	Water	01/18/18 09:05	01/19/18 09:20
160-26418-1	B3FY19	Water	01/15/18 12:44	01/18/18 10:00
160-26418-2	B3FPN0	Water	01/15/18 12:11	01/18/18 10:00
160-26418-3	B3FWF7	Water	01/15/18 09:18	01/18/18 10:00
160-26418-4	B3FTN1	Water	01/11/18 12:15	01/18/18 10:00
160-26418-5	B3FYC9	Water	01/11/18 12:15	01/18/18 10:00
160-26418-6	B3FRH8	Water	01/15/18 13:48	01/18/18 10:00
160-26418-7	B3FV04	Water	01/15/18 13:48	01/18/18 10:00
160-26418-8	B3FV05	Water	01/15/18 13:48	01/18/18 10:00
160-26418-9	B3FV06	Water	01/15/18 13:48	01/18/18 10:00
160-26418-10	B3FRK0	Water	01/17/18 09:59	01/18/18 10:00
160-26418-11	B3FRP9	Water	01/17/18 09:59	01/18/18 10:00
160-26418-12	B3FRP8	Water	01/17/18 09:59	01/18/18 10:00
160-26418-13	B3FRR0	Water	01/17/18 09:59	01/18/18 10:00

Method: 8260C - Volatile Organic Compounds (GC/MS)

Client Sample ID: B3HLB3 — **Lab Sample ID: 160-26405-8**
Date Collected: 01/18/18 09:05 — **Matrix: Water**
Date Received: 01/19/18 09:20

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.17	U	1.0	0.17	ug/L			01/30/18 09:45	1
1,1,2-Trichloroethane	0.13	U	1.0	0.13	ug/L			01/30/18 09:45	1
1,1-Dichloroethane	0.070	U	1.0	0.070	ug/L			01/30/18 09:45	1
1,1-Dichloroethene	0.10	U	1.0	0.10	ug/L			01/30/18 09:45	1
1,2-Dichloroethane	0.22	U	1.0	0.22	ug/L			01/30/18 09:45	1
2-Butanone (MEK)	0.47	U	5.0	0.47	ug/L			01/30/18 09:45	1
4-Methyl-2-pentanone (MIBK)	0.22	U	5.0	0.22	ug/L			01/30/18 09:45	1
Acetone	**1.4**	**J**	2.0	0.55	ug/L			01/30/18 09:45	1
Benzene	0.10	U	1.0	0.10	ug/L			01/30/18 09:45	1
Carbon disulfide	0.10	U	1.0	0.10	ug/L			01/30/18 09:45	1
Carbon tetrachloride	0.18	U	1.0	0.18	ug/L			01/30/18 09:45	1
Chlorobenzene	0.11	U	1.0	0.11	ug/L			01/30/18 09:45	1
Chloroform	0.10	U	1.0	0.10	ug/L			01/30/18 09:45	1
Ethylbenzene	0.12	U	1.0	0.12	ug/L			01/30/18 09:45	1
Methylene Chloride	**2.5**		1.0	0.27	ug/L			01/30/18 09:45	1
Tetrachloroethene	0.18	U	1.0	0.18	ug/L			01/30/18 09:45	1
Toluene	0.14	U	1.0	0.14	ug/L			01/30/18 09:45	1
Trichloroethene	0.25	U	1.0	0.25	ug/L			01/30/18 09:45	1
Vinyl chloride	0.19	U	2.0	0.19	ug/L			01/30/18 09:45	1
Xylenes, Total	0.27	U	3.0	0.27	ug/L			01/30/18 09:45	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Isopropyl alcohol	*51*		*ug/L*		*5.94*	*67-63-0*		*01/30/18 09:45*	*1*
Tentatively Identified Compound	*None*		*ug/L*					*01/30/18 09:45*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*75 - 129*		*01/30/18 09:45*	*1*
4-Bromofluorobenzene (Surr)	*91*		*81 - 130*		*01/30/18 09:45*	*1*
Dibromofluoromethane (Surr)	*98*		*81 - 124*		*01/30/18 09:45*	*1*
Toluene-d8 (Surr)	*95*		*87 - 128*		*01/30/18 09:45*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Client Sample ID: B3FRH8 — **Lab Sample ID: 160-26418-6**
Date Collected: 01/15/18 13:48 — **Matrix: Water**
Date Received: 01/18/18 10:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,4,6-Tetrachlorophenol	0.95	U	48	0.95	ug/L		01/22/18 12:45	02/13/18 18:24	1
2,4,5-Trichlorophenol	0.95	U	9.5	0.95	ug/L		01/22/18 12:45	02/13/18 18:24	1
2,4,6-Trichlorophenol	0.95	U	9.5	0.95	ug/L		01/22/18 12:45	02/13/18 18:24	1
2,4-Dichlorophenol	0.95	U	9.5	0.95	ug/L		01/22/18 12:45	02/13/18 18:24	1
2,4-Dimethylphenol	0.95	U	9.5	0.95	ug/L		01/22/18 12:45	02/13/18 18:24	1
2,4-Dinitrophenol	1.9	U	48	1.9	ug/L		01/22/18 12:45	02/13/18 18:24	1
2,6-Dichlorophenol	0.95	U	9.5	0.95	ug/L		01/22/18 12:45	02/13/18 18:24	1
2-Chlorophenol	0.95	U	9.5	0.95	ug/L		01/22/18 12:45	02/13/18 18:24	1
2-Methylphenol	0.95	U	9.5	0.95	ug/L		01/22/18 12:45	02/13/18 18:24	1
2-Nitrophenol	1.4	U	9.5	1.4	ug/L		01/22/18 12:45	02/13/18 18:24	1
3 & 4 Methylphenol	1.9	U	19	1.9	ug/L		01/22/18 12:45	02/13/18 18:24	1
4,6-Dinitro-2-methylphenol	1.2	U	9.5	1.2	ug/L		01/22/18 12:45	02/13/18 18:24	1
4-Chloro-3-methylphenol	0.95	U	9.5	0.95	ug/L		01/22/18 12:45	02/13/18 18:24	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: B3FRH8 — **Lab Sample ID: 160-26418-6**
Date Collected: 01/15/18 13:48 — **Matrix: Water**
Date Received: 01/18/18 10:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	1.9	U	9.5	1.9	ug/L		01/22/18 12:45	02/13/18 18:24	1
Dinoseb	1.9	U	19	1.9	ug/L		01/22/18 12:45	02/13/18 18:24	1
Pentachlorophenol	1.2	U	48	1.2	ug/L		01/22/18 12:45	02/13/18 18:24	1
Phenol	1.9	U	9.5	1.9	ug/L		01/22/18 12:45	02/13/18 18:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*86*		*37 - 120*	*01/22/18 12:45*	*02/13/18 18:24*	*1*
2-Fluorobiphenyl (Surr)	*78*		*43 - 108*	*01/22/18 12:45*	*02/13/18 18:24*	*1*
2-Fluorophenol (Surr)	*39*		*15 - 59*	*01/22/18 12:45*	*02/13/18 18:24*	*1*
Nitrobenzene-d5 (Surr)	*77*		*50 - 101*	*01/22/18 12:45*	*02/13/18 18:24*	*1*
Phenol-d5 (Surr)	*26*		*10 - 50*	*01/22/18 12:45*	*02/13/18 18:24*	*1*
Terphenyl-d14 (Surr)	*88*		*21 - 97*	*01/22/18 12:45*	*02/13/18 18:24*	*1*

Method: 6010C - Metals (ICP)

Client Sample ID: B3FYH2 — **Lab Sample ID: 160-26405-6**
Date Collected: 01/17/18 12:30 — **Matrix: Water**
Date Received: 01/19/18 09:20

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	**24300**		1000	300	ug/L		01/22/18 11:30	01/23/18 16:14	1
Iron	**47.6**	**B**	100	30.0	ug/L		01/22/18 11:30	01/23/18 16:14	1
Magnesium	**9890**		1000	300	ug/L		01/22/18 11:30	01/23/18 16:14	1
Potassium	**3960**	**B**	5000	1500	ug/L		01/22/18 11:30	01/23/18 16:14	1
Sodium	**9930**		1000	300	ug/L		01/22/18 11:30	01/23/18 16:14	1
Vanadium	**18.8**	**B**	50.0	4.0	ug/L		01/22/18 11:30	01/23/18 16:14	1
Boron	25.0	U	100	25.0	ug/L		01/22/18 11:30	01/23/18 16:14	1

Client Sample ID: B3FYC9 — **Lab Sample ID: 160-26418-5**
Date Collected: 01/11/18 12:15 — **Matrix: Water**
Date Received: 01/18/18 10:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	**67600**		1000	300	ug/L		01/22/18 11:30	01/23/18 15:56	1
Iron	**82.4**	**B**	100	30.0	ug/L		01/22/18 11:30	01/23/18 15:56	1
Magnesium	**17500**		1000	300	ug/L		01/22/18 11:30	01/23/18 15:56	1
Potassium	**7090**		5000	1500	ug/L		01/22/18 11:30	01/23/18 15:56	1
Sodium	**22600**		1000	300	ug/L		01/22/18 11:30	01/23/18 15:56	1
Vanadium	**12.9**	**B**	50.0	4.0	ug/L		01/22/18 11:30	01/23/18 15:56	1
Boron	25.0	U	100	25.0	ug/L		01/22/18 11:30	01/23/18 15:56	1

Method: 6010C - Metals (ICP) - Dissolved

Client Sample ID: B3FX59 — **Lab Sample ID: 160-26405-7**
Date Collected: 01/17/18 12:30 — **Matrix: Water**
Date Received: 01/19/18 09:20

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	25.0	U	100	25.0	ug/L		01/22/18 11:30	01/23/18 16:19	1
Calcium	**25700**		1000	300	ug/L		01/22/18 11:30	01/23/18 16:19	1
Iron	30.0	U	100	30.0	ug/L		01/22/18 11:30	01/23/18 16:19	1
Magnesium	**10300**		1000	300	ug/L		01/22/18 11:30	01/23/18 16:19	1
Potassium	**4040**	**B**	5000	1500	ug/L		01/22/18 11:30	01/23/18 16:19	1

Method: 6010C - Metals (ICP) - Dissolved (Continued)

Client Sample ID: B3FX59 — **Lab Sample ID: 160-26405-7**
Date Collected: 01/17/18 12:30 — **Matrix: Water**
Date Received: 01/19/18 09:20

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	**10200**		1000	300	ug/L		01/22/18 11:30	01/23/18 16:19	1
Vanadium	**16.8**	**B**	50.0	4.0	ug/L		01/22/18 11:30	01/23/18 16:19	1

Client Sample ID: B3FTN1 — **Lab Sample ID: 160-26418-4**
Date Collected: 01/11/18 12:15 — **Matrix: Water**
Date Received: 01/18/18 10:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	25.0	U	100	25.0	ug/L		01/22/18 11:30	01/23/18 15:51	1
Calcium	**65900**		1000	300	ug/L		01/22/18 11:30	01/23/18 15:51	1
Iron	30.0	U	100	30.0	ug/L		01/22/18 11:30	01/23/18 15:51	1
Magnesium	**17500**		1000	300	ug/L		01/22/18 11:30	01/23/18 15:51	1
Potassium	**7100**		5000	1500	ug/L		01/22/18 11:30	01/23/18 15:51	1
Sodium	**22700**		1000	300	ug/L		01/22/18 11:30	01/23/18 15:51	1
Vanadium	**14.4**	**B**	50.0	4.0	ug/L		01/22/18 11:30	01/23/18 15:51	1

Method: 6020A - Metals (ICP/MS)

Client Sample ID: B3FXJ3 — **Lab Sample ID: 160-26405-2**
Date Collected: 01/18/18 07:25 — **Matrix: Water**
Date Received: 01/19/18 09:20

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	4.0	U D	10.0	4.0	ug/L		01/22/18 11:27	01/30/18 10:42	2

Client Sample ID: B3FXJ2 — **Lab Sample ID: 160-26405-5**
Date Collected: 01/18/18 10:21 — **Matrix: Water**
Date Received: 01/19/18 09:20

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	**30.6**	**D**	10.0	4.0	ug/L		01/22/18 11:27	01/30/18 10:56	2

Client Sample ID: B3FYH2 — **Lab Sample ID: 160-26405-6**
Date Collected: 01/17/18 12:30 — **Matrix: Water**
Date Received: 01/19/18 09:20

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	20.0	U D	50.0	20.0	ug/L		01/22/18 11:27	01/30/18 11:03	2
Antimony	2.0	U D	5.0	2.0	ug/L		01/22/18 11:27	01/30/18 11:03	2
Arsenic	4.0	U D	10.0	4.0	ug/L		01/22/18 11:27	01/30/18 11:03	2
Barium	**23.3**	**D**	2.0	0.90	ug/L		01/22/18 11:27	01/30/18 11:03	2
Beryllium	0.20	U D	0.50	0.20	ug/L		01/22/18 11:27	01/30/18 11:03	2
Cadmium	0.20	U D	0.50	0.20	ug/L		01/22/18 11:27	01/30/18 11:03	2
Chromium	**10.5**	**D**	10.0	4.0	ug/L		01/22/18 11:27	01/30/18 11:03	2
Cobalt	0.90	U D	2.0	0.90	ug/L		01/22/18 11:27	01/30/18 11:03	2
Copper	**0.63**	**B D C**	1.0	0.40	ug/L		01/22/18 11:27	01/30/18 11:03	2
Lead	1.0	U D	3.0	1.0	ug/L		01/22/18 11:27	01/30/18 11:03	2
Manganese	**1.3**	**B D**	2.0	0.90	ug/L		01/22/18 11:27	01/30/18 11:03	2
Molybdenum	**4.1**	**B D**	5.0	2.0	ug/L		01/22/18 11:27	01/30/18 11:03	2
Nickel	**5.0**	**D**	5.0	2.0	ug/L		01/22/18 11:27	01/30/18 11:03	2
Selenium	2.0	U D	5.0	2.0	ug/L		01/22/18 11:27	01/30/18 11:03	2
Silver	0.90	U D	2.0	0.90	ug/L		01/22/18 11:27	01/30/18 11:03	2
Strontium	**177**	**D**	5.0	0.50	ug/L		01/22/18 11:27	01/30/18 11:03	2
Thallium	0.90	U D	2.0	0.90	ug/L		01/22/18 11:27	01/30/18 11:03	2

Method: 6020A - Metals (ICP/MS) (Continued)

Client Sample ID: B3FYH2 — **Lab Sample ID: 160-26405-6**
Date Collected: 01/17/18 12:30 — **Matrix: Water**
Date Received: 01/19/18 09:20

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	0.90	U D	2.0	0.90	ug/L		01/22/18 11:27	01/30/18 11:03	2
Tin	1.2	U D	2.0	1.2	ug/L		01/22/18 11:27	01/30/18 11:03	2
Uranium	**2.3**	**D**	1.0	0.40	ug/L		01/22/18 11:27	01/30/18 11:03	2
Zinc	7.5	U D	20.0	7.5	ug/L		01/22/18 11:27	01/30/18 11:03	2

Client Sample ID: B3FYC9 — **Lab Sample ID: 160-26418-5**
Date Collected: 01/11/18 12:15 — **Matrix: Water**
Date Received: 01/18/18 10:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	20.0	U D	50.0	20.0	ug/L		01/22/18 11:27	01/30/18 10:22	2
Antimony	2.0	U D	5.0	2.0	ug/L		01/22/18 11:27	01/30/18 10:22	2
Arsenic	4.0	U D	10.0	4.0	ug/L		01/22/18 11:27	01/30/18 10:22	2
Barium	**64.6**	**D**	2.0	0.90	ug/L		01/22/18 11:27	01/30/18 10:22	2
Beryllium	0.20	U D	0.50	0.20	ug/L		01/22/18 11:27	01/30/18 10:22	2
Cadmium	0.20	U D	0.50	0.20	ug/L		01/22/18 11:27	01/30/18 10:22	2
Chromium	**27.8**	**D**	10.0	4.0	ug/L		01/22/18 11:27	01/30/18 10:22	2
Cobalt	0.90	U D	2.0	0.90	ug/L		01/22/18 11:27	01/30/18 10:22	2
Copper	**0.67**	**B D C**	1.0	0.40	ug/L		01/22/18 11:27	01/30/18 10:22	2
Lead	1.0	U D	3.0	1.0	ug/L		01/22/18 11:27	01/30/18 10:22	2
Manganese	**2.1**	**D**	2.0	0.90	ug/L		01/22/18 11:27	01/30/18 10:22	2
Molybdenum	**5.7**	**D**	5.0	2.0	ug/L		01/22/18 11:27	01/30/18 10:22	2
Nickel	**9.9**	**D**	5.0	2.0	ug/L		01/22/18 11:27	01/30/18 10:22	2
Selenium	**3.5**	**B D**	5.0	2.0	ug/L		01/22/18 11:27	01/30/18 10:22	2
Silver	0.90	U D	2.0	0.90	ug/L		01/22/18 11:27	01/30/18 10:22	2
Strontium	**299**	**D**	5.0	0.50	ug/L		01/22/18 11:27	01/30/18 10:22	2
Thallium	0.90	U D	2.0	0.90	ug/L		01/22/18 11:27	01/30/18 10:22	2
Thorium	0.90	U D	2.0	0.90	ug/L		01/22/18 11:27	01/30/18 10:22	2
Tin	1.2	U D	2.0	1.2	ug/L		01/22/18 11:27	01/30/18 10:22	2
Uranium	**6.4**	**D**	1.0	0.40	ug/L		01/22/18 11:27	01/30/18 10:22	2
Zinc	7.5	U D	20.0	7.5	ug/L		01/22/18 11:27	01/30/18 10:22	2

Method: 6020A - Metals (ICP/MS) - Dissolved

Client Sample ID: B3FWC3 — **Lab Sample ID: 160-26405-1**
Date Collected: 01/18/18 07:25 — **Matrix: Water**
Date Received: 01/19/18 09:20

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	4.0	U D	10.0	4.0	ug/L		01/22/18 11:27	01/30/18 10:36	2

Client Sample ID: B3FWC4 — **Lab Sample ID: 160-26405-4**
Date Collected: 01/18/18 10:21 — **Matrix: Water**
Date Received: 01/19/18 09:20

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	**30.3**	**D**	10.0	4.0	ug/L		01/22/18 11:27	01/30/18 10:49	2

Client Sample ID: B3FX59 — **Lab Sample ID: 160-26405-7**
Date Collected: 01/17/18 12:30 — **Matrix: Water**
Date Received: 01/19/18 09:20

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	20.0	U D	50.0	20.0	ug/L		01/22/18 12:14	01/30/18 11:10	2

Method: 6020A - Metals (ICP/MS) - Dissolved (Continued)

Client Sample ID: B3FX59 **Lab Sample ID: 160-26405-7**
Date Collected: 01/17/18 12:30 **Matrix: Water**
Date Received: 01/19/18 09:20

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0	U D	5.0	2.0	ug/L		01/22/18 12:14	01/30/18 11:10	2
Arsenic	4.0	U D	10.0	4.0	ug/L		01/22/18 12:14	01/30/18 11:10	2
Barium	**23.6**	**D**	2.0	0.90	ug/L		01/22/18 12:14	01/30/18 11:10	2
Beryllium	0.20	U D	0.50	0.20	ug/L		01/22/18 12:14	01/30/18 11:10	2
Cadmium	0.20	U D	0.50	0.20	ug/L		01/22/18 12:14	01/30/18 11:10	2
Chromium	4.0	U D	10.0	4.0	ug/L		01/22/18 12:14	01/30/18 11:10	2
Cobalt	0.90	U D	2.0	0.90	ug/L		01/22/18 12:14	01/30/18 11:10	2
Copper	0.40	U D	1.0	0.40	ug/L		01/22/18 12:14	01/30/18 11:10	2
Lead	1.0	U D	3.0	1.0	ug/L		01/22/18 12:14	01/30/18 11:10	2
Manganese	0.90	U D	2.0	0.90	ug/L		01/22/18 12:14	01/30/18 11:10	2
Molybdenum	**4.0**	**B D**	5.0	2.0	ug/L		01/22/18 12:14	01/30/18 11:10	2
Nickel	2.0	U D	5.0	2.0	ug/L		01/22/18 12:14	01/30/18 11:10	2
Selenium	2.0	U D	5.0	2.0	ug/L		01/22/18 12:14	01/30/18 11:10	2
Silver	0.90	U D	2.0	0.90	ug/L		01/22/18 12:14	01/30/18 11:10	2
Strontium	**180**	**D**	5.0	0.50	ug/L		01/22/18 12:14	01/30/18 11:10	2
Thallium	0.90	U D	2.0	0.90	ug/L		01/22/18 12:14	01/30/18 11:10	2
Thorium	0.90	U D	2.0	0.90	ug/L		01/22/18 12:14	01/30/18 11:10	2
Tin	1.2	U D	2.0	1.2	ug/L		01/22/18 12:14	01/30/18 11:10	2
Uranium	**2.3**	**D**	1.0	0.40	ug/L		01/22/18 12:14	01/30/18 11:10	2
Zinc	7.5	U D	20.0	7.5	ug/L		01/22/18 12:14	01/30/18 11:10	2

Client Sample ID: B3FTN1 **Lab Sample ID: 160-26418-4**
Date Collected: 01/11/18 12:15 **Matrix: Water**
Date Received: 01/18/18 10:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	20.0	U D	50.0	20.0	ug/L		01/22/18 11:27	01/30/18 09:55	2
Antimony	2.0	U D	5.0	2.0	ug/L		01/22/18 11:27	01/30/18 09:55	2
Arsenic	4.0	U D	10.0	4.0	ug/L		01/22/18 11:27	01/30/18 09:55	2
Barium	**63.1**	**D**	2.0	0.90	ug/L		01/22/18 11:27	01/30/18 09:55	2
Beryllium	0.20	U D	0.50	0.20	ug/L		01/22/18 11:27	01/30/18 09:55	2
Cadmium	0.20	U D	0.50	0.20	ug/L		01/22/18 11:27	01/30/18 09:55	2
Chromium	**9.7**	**B D**	10.0	4.0	ug/L		01/22/18 11:27	01/30/18 09:55	2
Cobalt	0.90	U D	2.0	0.90	ug/L		01/22/18 11:27	01/30/18 09:55	2
Copper	0.40	U D	1.0	0.40	ug/L		01/22/18 11:27	01/30/18 09:55	2
Lead	1.0	U D	3.0	1.0	ug/L		01/22/18 11:27	01/30/18 09:55	2
Manganese	**2.7**	**D**	2.0	0.90	ug/L		01/22/18 11:27	01/30/18 09:55	2
Molybdenum	**5.3**	**D**	5.0	2.0	ug/L		01/22/18 11:27	01/30/18 09:55	2
Nickel	2.0	U D	5.0	2.0	ug/L		01/22/18 11:27	01/30/18 09:55	2
Selenium	**4.4**	**B D**	5.0	2.0	ug/L		01/22/18 11:27	01/30/18 09:55	2
Silver	0.90	U D	2.0	0.90	ug/L		01/22/18 11:27	01/30/18 09:55	2
Strontium	**293**	**D**	5.0	0.50	ug/L		01/22/18 11:27	01/30/18 09:55	2
Thallium	0.90	U D	2.0	0.90	ug/L		01/22/18 11:27	01/30/18 09:55	2
Thorium	0.90	U D	2.0	0.90	ug/L		01/22/18 11:27	01/30/18 09:55	2
Tin	1.2	U D	2.0	1.2	ug/L		01/22/18 11:27	01/30/18 09:55	2
Uranium	**6.2**	**D**	1.0	0.40	ug/L		01/22/18 11:27	01/30/18 09:55	2
Zinc	7.5	U D	20.0	7.5	ug/L		01/22/18 11:27	01/30/18 09:55	2

Method: 7470A - Mercury (CVAA)

Client Sample ID: B3FYC9 — **Lab Sample ID: 160-26418-5**
Date Collected: 01/11/18 12:15 — **Matrix: Water**
Date Received: 01/18/18 10:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.060	U	0.20	0.060	ug/L		01/23/18 07:22	01/23/18 13:02	1

Method: 7470A - Mercury (CVAA) - Dissolved

Client Sample ID: B3FTN1 — **Lab Sample ID: 160-26418-4**
Date Collected: 01/11/18 12:15 — **Matrix: Water**
Date Received: 01/18/18 10:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.060	U	0.20	0.060	ug/L		01/23/18 07:22	01/23/18 13:00	1

General Chemistry

Client Sample ID: B3FYC9 — **Lab Sample ID: 160-26418-5**
Date Collected: 01/11/18 12:15 — **Matrix: Water**
Date Received: 01/18/18 10:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	**242**		5.0	0.54	mg/L			01/23/18 10:04	1

Client Sample ID: B3FRH8 — **Lab Sample ID: 160-26418-6**
Date Collected: 01/15/18 13:48 — **Matrix: Water**
Date Received: 01/18/18 10:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	**87.0**		5.0	0.54	mg/L			01/23/18 10:04	1
Bicarbonate Alkalinity	**87.0**		5.0	0.54	mg/L			01/23/18 10:04	1
Carbonate Alkalinity	0.54	U	5.0	0.54	mg/L			01/23/18 10:04	1
Hydroxide Alkalinity	0.54	U	5.0	0.54	mg/L			01/23/18 10:04	1
Halogens, Total Organic	**5.5**	**C**	5.0	2.1	ug/L		02/07/18 12:00	02/08/18 17:49	1
Total Organic Carbon	0.50	U	1.0	0.50	mg/L			02/06/18 20:41	1

Client Sample ID: B3FV04 — **Lab Sample ID: 160-26418-7**
Date Collected: 01/15/18 13:48 — **Matrix: Water**
Date Received: 01/18/18 10:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Halogens, Total Organic	**5.6**	**C**	5.0	2.1	ug/L		02/07/18 12:00	02/08/18 19:51	1
Total Organic Carbon	0.50	U	1.0	0.50	mg/L			02/06/18 20:52	1

Client Sample ID: B3FV05 — **Lab Sample ID: 160-26418-8**
Date Collected: 01/15/18 13:48 — **Matrix: Water**
Date Received: 01/18/18 10:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Halogens, Total Organic	**7.0**	**C**	5.0	2.1	ug/L		02/07/18 12:00	02/08/18 20:27	1
Total Organic Carbon	0.50	U	1.0	0.50	mg/L			02/06/18 21:04	1

Client Sample ID: B3FV06 — **Lab Sample ID: 160-26418-9**
Date Collected: 01/15/18 13:48 — **Matrix: Water**
Date Received: 01/18/18 10:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Halogens, Total Organic	**9.0**	**C**	5.0	2.1	ug/L		02/07/18 12:00	02/08/18 21:21	1
Total Organic Carbon	0.50	U	1.0	0.50	mg/L			02/06/18 21:15	1

General Chemistry

Client Sample ID: B3FRK0 — **Lab Sample ID: 160-26418-10**
Date Collected: 01/17/18 09:59 — **Matrix: Water**
Date Received: 01/18/18 10:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Halogens, Total Organic	2.1	U	5.0	2.1	ug/L		02/12/18 12:00	02/13/18 19:28	1
Total Organic Carbon	0.50	U	1.0	0.50	mg/L			02/06/18 21:27	1

Client Sample ID: B3FRP9 — **Lab Sample ID: 160-26418-11**
Date Collected: 01/17/18 09:59 — **Matrix: Water**
Date Received: 01/18/18 10:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Halogens, Total Organic	2.1	U	5.0	2.1	ug/L		02/12/18 12:00	02/13/18 21:27	1
Total Organic Carbon	0.50	U	1.0	0.50	mg/L			02/06/18 21:38	1

Client Sample ID: B3FRP8 — **Lab Sample ID: 160-26418-12**
Date Collected: 01/17/18 09:59 — **Matrix: Water**
Date Received: 01/18/18 10:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Halogens, Total Organic	**5.9**		5.0	2.1	ug/L		02/12/18 12:00	02/13/18 21:58	1
Total Organic Carbon	0.50	U	1.0	0.50	mg/L			02/06/18 21:50	1

Client Sample ID: B3FRR0 — **Lab Sample ID: 160-26418-13**
Date Collected: 01/17/18 09:59 — **Matrix: Water**
Date Received: 01/18/18 10:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Halogens, Total Organic	2.1	U	5.0	2.1	ug/L		02/12/18 12:00	02/13/18 22:50	1
Total Organic Carbon	0.50	U	1.0	0.50	mg/L			02/06/18 22:01	1

Method: 906.0 - Tritium, Total (LSC)

Client Sample ID: B3FXJ3 — **Lab Sample ID: 160-26405-2**
Date Collected: 01/18/18 07:25 — **Matrix: Water**
Date Received: 01/19/18 09:20

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-140	U	162	163	500	309	pCi/L	01/22/18 12:17	01/23/18 04:24	1

Client Sample ID: B3FXJ2 — **Lab Sample ID: 160-26405-5**
Date Collected: 01/18/18 10:21 — **Matrix: Water**
Date Received: 01/19/18 09:20

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	**1470**		275	304	500	305	pCi/L	01/22/18 12:17	01/23/18 04:45	1

Client Sample ID: B3FWF7 — **Lab Sample ID: 160-26418-3**
Date Collected: 01/15/18 09:18 — **Matrix: Water**
Date Received: 01/18/18 10:00

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-4.5	U	179	179	500	320	pCi/L	01/22/18 12:17	01/23/18 04:03	1

Client Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: S18-001/X18-005/A18-001/I18-004/W18-001

TestAmerica Job ID: 160-26405-1
SDG: SL2792

Method: SR-03-RC - Total Beta Strontium (GFPC)

Client Sample ID: B3FXJ3 — **Lab Sample ID: 160-26405-2**
Date Collected: 01/18/18 07:25 — **Matrix: Water**
Date Received: 01/19/18 09:20

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium 89/90	0.0594	U	0.0604	0.0605	2.00	0.0979	pCi/L	01/22/18 10:57	01/29/18 05:57	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*86.2*		*40 - 110*	*01/22/18 10:57*	*01/29/18 05:57*	*1*

Client Sample ID: B3FXJ2 — **Lab Sample ID: 160-26405-5**
Date Collected: 01/18/18 10:21 — **Matrix: Water**
Date Received: 01/19/18 09:20

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium 89/90	-0.020	U	0.0608	0.0608	2.00	0.114	pCi/L	01/22/18 10:57	01/29/18 05:58	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*78.1*		*40 - 110*	*01/22/18 10:57*	*01/29/18 05:58*	*1*

Method: TC-02-RC - Technetium-99 (LSC)

Client Sample ID: B3FY22 — **Lab Sample ID: 160-26405-3**
Date Collected: 01/17/18 08:57 — **Matrix: Water**
Date Received: 01/19/18 09:20

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Technetium-99	**103**		3.28	10.4	3.00	2.06	pCi/L	01/31/18 09:07	02/04/18 20:09	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tc-99m	*101*		*30 - 105*	*01/31/18 09:07*	*02/04/18 20:09*	*1*

Client Sample ID: B3FY19 — **Lab Sample ID: 160-26418-1**
Date Collected: 01/15/18 12:44 — **Matrix: Water**
Date Received: 01/18/18 10:00

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Technetium-99	**1220**		18.4	118	3.00	3.04	pCi/L	01/31/18 09:07	02/04/18 20:59	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tc-99m	*98.8*		*30 - 105*	*01/31/18 09:07*	*02/04/18 20:59*	*1*

Client Sample ID: B3FPN0 — **Lab Sample ID: 160-26418-2**
Date Collected: 01/15/18 12:11 — **Matrix: Water**
Date Received: 01/18/18 10:00

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Technetium-99	-0.057	U	1.20	1.20	3.00	2.04	pCi/L	01/31/18 09:07	02/04/18 21:16	1

Tracer	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tc-99m	*99.5*		*30 - 105*	*01/31/18 09:07*	*02/04/18 21:16*	*1*

Method: 8260C - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 160-348666/6
Matrix: Water
Analysis Batch: 348666

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.17	U	1.0	0.17	ug/L			01/30/18 08:56	1
1,1,2-Trichloroethane	0.13	U	1.0	0.13	ug/L			01/30/18 08:56	1
1,1-Dichloroethane	0.070	U	1.0	0.070	ug/L			01/30/18 08:56	1
1,1-Dichloroethene	0.10	U	1.0	0.10	ug/L			01/30/18 08:56	1
1,2-Dichloroethane	0.22	U	1.0	0.22	ug/L			01/30/18 08:56	1
2-Butanone (MEK)	0.47	U	5.0	0.47	ug/L			01/30/18 08:56	1
4-Methyl-2-pentanone (MIBK)	0.22	U	5.0	0.22	ug/L			01/30/18 08:56	1
Acetone	0.55	U	2.0	0.55	ug/L			01/30/18 08:56	1
Benzene	0.10	U	1.0	0.10	ug/L			01/30/18 08:56	1
Carbon disulfide	0.10	U	1.0	0.10	ug/L			01/30/18 08:56	1
Carbon tetrachloride	0.18	U	1.0	0.18	ug/L			01/30/18 08:56	1
Chlorobenzene	0.11	U	1.0	0.11	ug/L			01/30/18 08:56	1
Chloroform	0.10	U	1.0	0.10	ug/L			01/30/18 08:56	1
Ethylbenzene	0.12	U	1.0	0.12	ug/L			01/30/18 08:56	1
Methylene Chloride	0.27	U	1.0	0.27	ug/L			01/30/18 08:56	1
Tetrachloroethene	0.18	U	1.0	0.18	ug/L			01/30/18 08:56	1
Toluene	0.14	U	1.0	0.14	ug/L			01/30/18 08:56	1
Trichloroethene	0.25	U	1.0	0.25	ug/L			01/30/18 08:56	1
Vinyl chloride	0.19	U	2.0	0.19	ug/L			01/30/18 08:56	1
Xylenes, Total	0.27	U	3.0	0.27	ug/L			01/30/18 08:56	1

Tentatively Identified Compound	*MB Est. Result*	*MB Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*01/30/18 08:56*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*75 - 129*		*01/30/18 08:56*	*1*
4-Bromofluorobenzene (Surr)	*89*		*81 - 130*		*01/30/18 08:56*	*1*
Dibromofluoromethane (Surr)	*96*		*81 - 124*		*01/30/18 08:56*	*1*
Toluene-d8 (Surr)	*93*		*87 - 128*		*01/30/18 08:56*	*1*

Lab Sample ID: LCS 160-348666/3
Matrix: Water
Analysis Batch: 348666

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	10.0	9.46		ug/L		95	85 - 116
1,1,2-Trichloroethane	10.0	8.76		ug/L		88	80 - 120
1,1-Dichloroethane	10.0	9.23		ug/L		92	80 - 120
1,1-Dichloroethene	10.0	8.56		ug/L		86	80 - 120
1,2-Dichloroethane	10.0	10.1		ug/L		101	80 - 115
2-Butanone (MEK)	10.0	10.3		ug/L		103	67 - 127
4-Methyl-2-pentanone (MIBK)	10.0	9.11		ug/L		91	75 - 126
Acetone	10.0	10.9		ug/L		109	69 - 129
Benzene	10.0	9.25		ug/L		93	80 - 120
Carbon disulfide	10.0	8.31		ug/L		83	80 - 121
Carbon tetrachloride	10.0	9.63		ug/L		96	83 - 125
Chlorobenzene	10.0	9.69		ug/L		97	80 - 120

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 160-348666/3
Matrix: Water
Analysis Batch: 348666

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloroform	10.0	9.49		ug/L		95	80 - 120
Ethylbenzene	10.0	9.05		ug/L		90	80 - 120
Methylene Chloride	10.0	9.02		ug/L		90	80 - 120
Tetrachloroethene	10.0	9.02		ug/L		90	83 - 123
Toluene	10.0	9.01		ug/L		90	80 - 120
Trichloroethene	10.0	9.52		ug/L		95	80 - 120
Vinyl chloride	10.0	8.95		ug/L		90	77 - 122
Xylenes, Total	20.0	18.0		ug/L		90	80 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*102*		*75 - 129*
4-Bromofluorobenzene (Surr)	*87*		*81 - 130*
Dibromofluoromethane (Surr)	*99*		*81 - 124*
Toluene-d8 (Surr)	*91*		*87 - 128*

Lab Sample ID: LCSD 160-348666/4
Matrix: Water
Analysis Batch: 348666

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane	10.0	9.61		ug/L		96	85 - 116	2	20
1,1,2-Trichloroethane	10.0	8.62		ug/L		86	80 - 120	2	20
1,1-Dichloroethane	10.0	9.30		ug/L		93	80 - 120	1	20
1,1-Dichloroethene	10.0	8.80		ug/L		88	80 - 120	3	20
1,2-Dichloroethane	10.0	9.88		ug/L		99	80 - 115	2	20
2-Butanone (MEK)	10.0	9.86		ug/L		99	67 - 127	4	20
4-Methyl-2-pentanone (MIBK)	10.0	8.86		ug/L		89	75 - 126	3	20
Acetone	10.0	10.5		ug/L		105	69 - 129	4	20
Benzene	10.0	9.34		ug/L		93	80 - 120	1	20
Carbon disulfide	10.0	8.47		ug/L		85	80 - 121	2	20
Carbon tetrachloride	10.0	9.86		ug/L		99	83 - 125	2	20
Chlorobenzene	10.0	9.84		ug/L		98	80 - 120	2	20
Chloroform	10.0	9.51		ug/L		95	80 - 120	0	20
Ethylbenzene	10.0	9.31		ug/L		93	80 - 120	3	20
Methylene Chloride	10.0	8.97		ug/L		90	80 - 120	1	20
Tetrachloroethene	10.0	9.32		ug/L		93	83 - 123	3	20
Toluene	10.0	9.29		ug/L		93	80 - 120	3	20
Trichloroethene	10.0	9.75		ug/L		98	80 - 120	2	20
Vinyl chloride	10.0	9.08		ug/L		91	77 - 122	1	20
Xylenes, Total	20.0	18.4		ug/L		92	80 - 120	2	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*98*		*75 - 129*
4-Bromofluorobenzene (Surr)	*88*		*81 - 130*
Dibromofluoromethane (Surr)	*98*		*81 - 124*
Toluene-d8 (Surr)	*93*		*87 - 128*

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 160-26405-8 MS
Matrix: Water
Analysis Batch: 348666

Client Sample ID: B3HLB3
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	0.17	U	10.0	9.81		ug/L		98	82 - 124
1,1,2-Trichloroethane	0.13	U	10.0	8.62		ug/L		86	80 - 120
1,1-Dichloroethane	0.070	U	10.0	9.41		ug/L		94	80 - 122
1,1-Dichloroethene	0.10	U	10.0	8.85		ug/L		88	80 - 120
1,2-Dichloroethane	0.22	U	10.0	10.1		ug/L		101	80 - 120
2-Butanone (MEK)	0.47	U	10.0	10.1		ug/L		101	53 - 145
4-Methyl-2-pentanone (MIBK)	0.22	U	10.0	8.94		ug/L		89	70 - 131
Acetone	1.4	J	10.0	11.6		ug/L		102	50 - 137
Benzene	0.10	U	10.0	9.49		ug/L		95	80 - 120
Carbon disulfide	0.10	U	10.0	8.51		ug/L		85	80 - 121
Carbon tetrachloride	0.18	U	10.0	9.98		ug/L		100	77 - 131
Chlorobenzene	0.11	U	10.0	10.1		ug/L		101	80 - 120
Chloroform	0.10	U	10.0	9.70		ug/L		97	80 - 120
Ethylbenzene	0.12	U	10.0	9.51		ug/L		95	84 - 125
Methylene Chloride	2.5		10.0	11.5		ug/L		90	80 - 120
Tetrachloroethene	0.18	U	10.0	9.41		ug/L		94	80 - 126
Toluene	0.14	U	10.0	9.38		ug/L		94	85 - 123
Trichloroethene	0.25	U	10.0	9.79		ug/L		98	81 - 125
Vinyl chloride	0.19	U	10.0	8.94		ug/L		89	70 - 129
Xylenes, Total	0.27	U	20.0	18.8		ug/L		94	80 - 120

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*99*		*75 - 129*
4-Bromofluorobenzene (Surr)	*89*		*81 - 130*
Dibromofluoromethane (Surr)	*98*		*81 - 124*
Toluene-d8 (Surr)	*93*		*87 - 128*

Lab Sample ID: 160-26405-8 MSD
Matrix: Water
Analysis Batch: 348666

Client Sample ID: B3HLB3
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane	0.17	U	10.0	9.75		ug/L		97	82 - 124	1	20
1,1,2-Trichloroethane	0.13	U	10.0	8.31		ug/L		83	80 - 120	4	20
1,1-Dichloroethane	0.070	U	10.0	9.45		ug/L		95	80 - 122	0	20
1,1-Dichloroethene	0.10	U	10.0	8.72		ug/L		87	80 - 120	2	20
1,2-Dichloroethane	0.22	U	10.0	9.81		ug/L		98	80 - 120	2	20
2-Butanone (MEK)	0.47	U	10.0	9.84		ug/L		98	53 - 145	3	20
4-Methyl-2-pentanone (MIBK)	0.22	U	10.0	8.70		ug/L		87	70 - 131	3	20
Acetone	1.4	J	10.0	9.15	y	ug/L		77	50 - 137	24	20
Benzene	0.10	U	10.0	9.41		ug/L		94	80 - 120	1	20
Carbon disulfide	0.10	U	10.0	8.63		ug/L		86	80 - 121	1	20
Carbon tetrachloride	0.18	U	10.0	9.91		ug/L		99	77 - 131	1	20
Chlorobenzene	0.11	U	10.0	9.89		ug/L		99	80 - 120	2	20
Chloroform	0.10	U	10.0	9.59		ug/L		96	80 - 120	1	20
Ethylbenzene	0.12	U	10.0	9.41		ug/L		94	84 - 125	1	20
Methylene Chloride	2.5		10.0	11.4		ug/L		89	80 - 120	1	20
Tetrachloroethene	0.18	U	10.0	9.36		ug/L		94	80 - 126	1	20

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 160-26405-8 MSD — **Client Sample ID: B3HLB3**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 348666

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Toluene	0.14	U	10.0	9.31		ug/L		93	85 - 123	1	20
Trichloroethene	0.25	U	10.0	9.60		ug/L		96	81 - 125	2	20
Vinyl chloride	0.19	U	10.0	9.01		ug/L		90	70 - 129	1	20
Xylenes, Total	0.27	U	20.0	18.6		ug/L		93	80 - 120	1	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*98*		*75 - 129*
4-Bromofluorobenzene (Surr)	*90*		*81 - 130*
Dibromofluoromethane (Surr)	*99*		*81 - 124*
Toluene-d8 (Surr)	*94*		*87 - 128*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 160-347317/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 350869 — **Prep Batch: 347317**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,4,6-Tetrachlorophenol	1.0	U	50	1.0	ug/L		01/22/18 12:45	02/13/18 13:29	1
2,4,5-Trichlorophenol	1.0	U	10	1.0	ug/L		01/22/18 12:45	02/13/18 13:29	1
2,4,6-Trichlorophenol	1.0	U	10	1.0	ug/L		01/22/18 12:45	02/13/18 13:29	1
2,4-Dichlorophenol	1.0	U	10	1.0	ug/L		01/22/18 12:45	02/13/18 13:29	1
2,4-Dimethylphenol	1.0	U	10	1.0	ug/L		01/22/18 12:45	02/13/18 13:29	1
2,4-Dinitrophenol	2.0	U	50	2.0	ug/L		01/22/18 12:45	02/13/18 13:29	1
2,6-Dichlorophenol	1.0	U	10	1.0	ug/L		01/22/18 12:45	02/13/18 13:29	1
2-Chlorophenol	1.0	U	10	1.0	ug/L		01/22/18 12:45	02/13/18 13:29	1
2-Methylphenol	1.0	U	10	1.0	ug/L		01/22/18 12:45	02/13/18 13:29	1
2-Nitrophenol	1.5	U	10	1.5	ug/L		01/22/18 12:45	02/13/18 13:29	1
3 & 4 Methylphenol	2.0	U	20	2.0	ug/L		01/22/18 12:45	02/13/18 13:29	1
4,6-Dinitro-2-methylphenol	1.3	U	10	1.3	ug/L		01/22/18 12:45	02/13/18 13:29	1
4-Chloro-3-methylphenol	1.0	U	10	1.0	ug/L		01/22/18 12:45	02/13/18 13:29	1
4-Nitrophenol	2.0	U	10	2.0	ug/L		01/22/18 12:45	02/13/18 13:29	1
Dinoseb	2.0	U	20	2.0	ug/L		01/22/18 12:45	02/13/18 13:29	1
Pentachlorophenol	1.3	U	50	1.3	ug/L		01/22/18 12:45	02/13/18 13:29	1
Phenol	2.0	U	10	2.0	ug/L		01/22/18 12:45	02/13/18 13:29	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*86*		*37 - 120*	*01/22/18 12:45*	*02/13/18 13:29*	*1*
2-Fluorobiphenyl (Surr)	*76*		*43 - 108*	*01/22/18 12:45*	*02/13/18 13:29*	*1*
2-Fluorophenol (Surr)	*44*		*15 - 59*	*01/22/18 12:45*	*02/13/18 13:29*	*1*
Nitrobenzene-d5 (Surr)	*74*		*50 - 101*	*01/22/18 12:45*	*02/13/18 13:29*	*1*
Phenol-d5 (Surr)	*31*		*10 - 50*	*01/22/18 12:45*	*02/13/18 13:29*	*1*
Terphenyl-d14 (Surr)	*93*		*21 - 97*	*01/22/18 12:45*	*02/13/18 13:29*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 160-347317/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 350869 — **Prep Batch: 347317**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4,5-Trichlorophenol	100	77.0		ug/L		77	56 - 113
2,4,6-Trichlorophenol	100	76.5		ug/L		77	47 - 116
2,4-Dichlorophenol	100	72.8		ug/L		73	55 - 104
2,4-Dimethylphenol	100	70.4		ug/L		70	53 - 99
2,4-Dinitrophenol	100	75.3		ug/L		75	53 - 119
2-Chlorophenol	100	69.5		ug/L		70	47 - 97
2-Methylphenol	100	62.7		ug/L		63	40 - 96
2-Nitrophenol	100	72.8		ug/L		73	58 - 111
3 & 4 Methylphenol	100	64.2		ug/L		64	40 - 87
4,6-Dinitro-2-methylphenol	100	80.6		ug/L		81	56 - 118
4-Chloro-3-methylphenol	100	75.1		ug/L		75	51 - 102
4-Nitrophenol	100	34.7		ug/L		35	20 - 47
Pentachlorophenol	100	78.3		ug/L		78	49 - 115
Phenol	100	30.3		ug/L		30	20 - 69

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*83*		*37 - 120*
2-Fluorobiphenyl (Surr)	*76*		*43 - 108*
2-Fluorophenol (Surr)	*44*		*15 - 59*
Nitrobenzene-d5 (Surr)	*76*		*50 - 101*
Phenol-d5 (Surr)	*30*		*10 - 50*
Terphenyl-d14 (Surr)	*86*		*21 - 97*

Lab Sample ID: 160-26399-J-6-A MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 350869 — **Prep Batch: 347317**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4,5-Trichlorophenol	0.94	U	95.6	75.2		ug/L		79	61 - 108
2,4,6-Trichlorophenol	0.94	U	95.6	75.0		ug/L		79	61 - 108
2,4-Dichlorophenol	0.94	U	95.6	72.3		ug/L		76	60 - 99
2,4-Dimethylphenol	0.94	U	95.6	64.9		ug/L		68	54 - 97
2,4-Dinitrophenol	1.9	U	95.6	68.1		ug/L		71	20 - 131
2-Chlorophenol	0.94	U	95.6	66.7		ug/L		70	52 - 92
2-Methylphenol	0.94	U	95.6	58.6		ug/L		61	39 - 83
2-Nitrophenol	1.4	U	95.6	72.0		ug/L		75	64 - 106
3 & 4 Methylphenol	1.9	U	95.6	59.9		ug/L		63	39 - 82
4,6-Dinitro-2-methylphenol	1.2	U	95.6	68.2		ug/L		71	61 - 113
4-Chloro-3-methylphenol	0.94	U	95.6	70.3		ug/L		74	51 - 105
4-Nitrophenol	1.9	U	95.6	33.1		ug/L		35	15 - 42
Pentachlorophenol	1.2	U	95.6	70.2		ug/L		73	54 - 110
Phenol	1.9	U	95.6	27.8		ug/L		29	15 - 70

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*82*		*37 - 120*
2-Fluorobiphenyl (Surr)	*79*		*43 - 108*
2-Fluorophenol (Surr)	*42*		*15 - 59*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 160-26399-J-6-A MS
Matrix: Water
Analysis Batch: 350869

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 347317

Surrogate	MS %Recovery	MS Qualifier	Limits
Nitrobenzene-d5 (Surr)	*75*		*50 - 101*
Phenol-d5 (Surr)	*29*		*10 - 50*
Terphenyl-d14 (Surr)	*77*		*21 - 97*

Lab Sample ID: 160-26399-K-6-A MSD
Matrix: Water
Analysis Batch: 350869

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 347317

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,4,5-Trichlorophenol	0.94	U	95.7	76.1		ug/L		80	61 - 108	1	20
2,4,6-Trichlorophenol	0.94	U	95.7	74.5		ug/L		78	61 - 108	1	20
2,4-Dichlorophenol	0.94	U	95.7	70.1		ug/L		73	60 - 99	3	20
2,4-Dimethylphenol	0.94	U	95.7	62.8		ug/L		66	54 - 97	3	20
2,4-Dinitrophenol	1.9	U	95.7	67.0		ug/L		70	20 - 131	2	20
2-Chlorophenol	0.94	U	95.7	66.9		ug/L		70	52 - 92	0	20
2-Methylphenol	0.94	U	95.7	58.9		ug/L		62	39 - 83	1	20
2-Nitrophenol	1.4	U	95.7	70.5		ug/L		74	64 - 106	2	20
3 & 4 Methylphenol	1.9	U	95.7	60.1		ug/L		63	39 - 82	0	20
4,6-Dinitro-2-methylphenol	1.2	U	95.7	68.9		ug/L		72	61 - 113	1	20
4-Chloro-3-methylphenol	0.94	U	95.7	69.5		ug/L		73	51 - 105	1	20
4-Nitrophenol	1.9	U	95.7	33.1		ug/L		35	15 - 42	0	20
Pentachlorophenol	1.2	U	95.7	70.5		ug/L		74	54 - 110	1	20
Phenol	1.9	U	95.7	28.3		ug/L		30	15 - 70	2	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
2,4,6-Tribromophenol (Surr)	*78*		*37 - 120*
2-Fluorobiphenyl (Surr)	*78*		*43 - 108*
2-Fluorophenol (Surr)	*43*		*15 - 59*
Nitrobenzene-d5 (Surr)	*75*		*50 - 101*
Phenol-d5 (Surr)	*29*		*10 - 50*
Terphenyl-d14 (Surr)	*76*		*21 - 97*

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 160-347311/1-A
Matrix: Water
Analysis Batch: 347713

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 347311

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	300	U	1000	300	ug/L		01/22/18 11:30	01/23/18 14:20	1
Iron	30.0	U	100	30.0	ug/L		01/22/18 11:30	01/23/18 14:20	1
Magnesium	300	U	1000	300	ug/L		01/22/18 11:30	01/23/18 14:20	1
Potassium	1500	U	5000	1500	ug/L		01/22/18 11:30	01/23/18 14:20	1
Sodium	300	U	1000	300	ug/L		01/22/18 11:30	01/23/18 14:20	1
Boron	25.0	U	100	25.0	ug/L		01/22/18 11:30	01/23/18 14:20	1
Vanadium	4.0	U	50.0	4.0	ug/L		01/22/18 11:30	01/23/18 14:20	1

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: LCS 160-347311/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 347713 — **Prep Batch: 347311**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Calcium	10000	9433		ug/L		94	80 - 120
Iron	10000	9431		ug/L		94	80 - 120
Magnesium	10000	9090		ug/L		91	80 - 120
Potassium	10000	9283		ug/L		93	80 - 120
Sodium	10000	9458		ug/L		95	80 - 120
Boron	200	186.1		ug/L		93	80 - 120
Vanadium	1000	926.0		ug/L		93	80 - 120

Lab Sample ID: 160-26399-A-2-E MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 347713 — **Prep Batch: 347311**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Calcium	41300		10000	50990	X	ug/L		97	75 - 125
Iron	331		10000	9941		ug/L		96	75 - 125
Magnesium	10200		10000	19380		ug/L		91	75 - 125
Potassium	7530		10000	17120		ug/L		96	75 - 125
Sodium	19300		10000	29130		ug/L		98	75 - 125
Boron	25.0	U	200	202.2		ug/L		101	75 - 125
Vanadium	32.6	B	1000	965.0		ug/L		93	75 - 125

Lab Sample ID: 160-26399-A-2-F MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 347713 — **Prep Batch: 347311**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Calcium	41300		10000	50500	X	ug/L		92	75 - 125	1	20
Iron	331		10000	9794		ug/L		95	75 - 125	1	20
Magnesium	10200		10000	19350		ug/L		91	75 - 125	0	20
Potassium	7530		10000	16920		ug/L		94	75 - 125	1	20
Sodium	19300		10000	28880		ug/L		96	75 - 125	1	20
Boron	25.0	U	200	197.5		ug/L		99	75 - 125	2	20
Vanadium	32.6	B	1000	960.7		ug/L		93	75 - 125	0	20

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 160-347310/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 348796 — **Prep Batch: 347310**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	20.0	U D	50.0	20.0	ug/L		01/22/18 11:27	01/30/18 06:49	2
Antimony	2.0	U D	5.0	2.0	ug/L		01/22/18 11:27	01/30/18 06:49	2
Arsenic	4.0	U D	10.0	4.0	ug/L		01/22/18 11:27	01/30/18 06:49	2
Barium	0.90	U D	2.0	0.90	ug/L		01/22/18 11:27	01/30/18 06:49	2
Beryllium	0.20	U D	0.50	0.20	ug/L		01/22/18 11:27	01/30/18 06:49	2
Cadmium	0.20	U D	0.50	0.20	ug/L		01/22/18 11:27	01/30/18 06:49	2
Chromium	4.0	U D	10.0	4.0	ug/L		01/22/18 11:27	01/30/18 06:49	2

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 160-347310/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 348796 — **Prep Batch: 347310**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	0.90	U D	2.0	0.90	ug/L		01/22/18 11:27	01/30/18 06:49	2
Copper	0.504	B D	1.0	0.40	ug/L		01/22/18 11:27	01/30/18 06:49	2
Lead	1.0	U D	3.0	1.0	ug/L		01/22/18 11:27	01/30/18 06:49	2
Manganese	0.90	U D	2.0	0.90	ug/L		01/22/18 11:27	01/30/18 06:49	2
Molybdenum	2.0	U D	5.0	2.0	ug/L		01/22/18 11:27	01/30/18 06:49	2
Nickel	2.0	U D	5.0	2.0	ug/L		01/22/18 11:27	01/30/18 06:49	2
Selenium	2.0	U D	5.0	2.0	ug/L		01/22/18 11:27	01/30/18 06:49	2
Silver	0.90	U D	2.0	0.90	ug/L		01/22/18 11:27	01/30/18 06:49	2
Strontium	0.50	U D	5.0	0.50	ug/L		01/22/18 11:27	01/30/18 06:49	2
Thallium	0.90	U D	2.0	0.90	ug/L		01/22/18 11:27	01/30/18 06:49	2
Thorium	0.90	U D	2.0	0.90	ug/L		01/22/18 11:27	01/30/18 06:49	2
Tin	1.2	U D	2.0	1.2	ug/L		01/22/18 11:27	01/30/18 06:49	2
Uranium	0.40	U D	1.0	0.40	ug/L		01/22/18 11:27	01/30/18 06:49	2
Zinc	7.5	U D	20.0	7.5	ug/L		01/22/18 11:27	01/30/18 06:49	2

Lab Sample ID: LCS 160-347310/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 348796 — **Prep Batch: 347310**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	10000	9473	D	ug/L		95	80 - 120
Antimony	500	500.8	D	ug/L		100	80 - 120
Arsenic	1000	944.2	D	ug/L		94	80 - 120
Barium	1000	1033	D	ug/L		103	80 - 120
Beryllium	100	99.52	D	ug/L		100	80 - 120
Cadmium	1000	962.0	D	ug/L		96	80 - 120
Chromium	1000	1028	D	ug/L		103	80 - 120
Cobalt	1000	1008	D	ug/L		101	80 - 120
Copper	1000	1009	D	ug/L		101	80 - 120
Lead	1000	958.4	D	ug/L		96	80 - 120
Manganese	1000	953.7	D	ug/L		95	80 - 120
Molybdenum	500	476.1	D	ug/L		95	80 - 120
Nickel	1000	971.4	D	ug/L		97	80 - 120
Selenium	500	476.0	D	ug/L		95	80 - 120
Silver	200	196.9	D	ug/L		98	80 - 120
Strontium	1000	942.2	D	ug/L		94	80 - 120
Thallium	200	211.6	D	ug/L		106	80 - 120
Thorium	1000	971.1	D	ug/L		97	80 - 120
Tin	1000	974.0	D	ug/L		97	80 - 120
Uranium	1000	971.3	D	ug/L		97	80 - 120
Zinc	1000	929.8	D	ug/L		93	80 - 120

Lab Sample ID: 160-26399-A-2-B MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 348796 — **Prep Batch: 347310**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	31.9	B D	10000	9671	D	ug/L		96	75 - 125
Antimony	2.0	U D	500	511.0	D	ug/L		102	75 - 125

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: 160-26399-A-2-B MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 348796 — **Prep Batch: 347310**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	8.1	B D	1000	964.7	D	ug/L		96	75 - 125
Barium	30.6	D	1000	1059	D	ug/L		103	75 - 125
Beryllium	0.20	U D	100	101.8	D	ug/L		102	75 - 125
Cadmium	0.30	B D	1000	973.0	D	ug/L		97	75 - 125
Chromium	4.0	U D	1000	1037	D	ug/L		104	75 - 125
Cobalt	0.90	U D	1000	982.8	D	ug/L		98	75 - 125
Copper	0.65	B D C	1000	987.4	D	ug/L		99	75 - 125
Lead	1.3	B D	1000	971.8	D	ug/L		97	75 - 125
Manganese	104	D	1000	1058	D	ug/L		95	75 - 125
Molybdenum	3.9	B D	500	478.6	D	ug/L		95	75 - 125
Nickel	2.0	U D	1000	938.8	D	ug/L		94	75 - 125
Selenium	2.3	B D	500	504.3	D	ug/L		100	75 - 125
Silver	0.90	U D	200	197.4	D	ug/L		99	75 - 125
Strontium	201	D	1000	1143	D	ug/L		94	75 - 125
Thallium	0.90	U D	200	214.9	D	ug/L		107	75 - 125
Thorium	0.90	U D	1000	996.9	D	ug/L		100	75 - 125
Tin	1.2	U D	1000	993.9	D	ug/L		99	75 - 125
Uranium	1.9	D	1000	992.8	D	ug/L		99	75 - 125
Zinc	10.1	B D	1000	952.5	D	ug/L		94	75 - 125

Lab Sample ID: 160-26399-A-2-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 348796 — **Prep Batch: 347310**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aluminum	31.9	B D	10000	9557	D	ug/L		95	75 - 125	1	20
Antimony	2.0	U D	500	520.8	D	ug/L		104	75 - 125	2	20
Arsenic	8.1	B D	1000	971.0	D	ug/L		96	75 - 125	1	20
Barium	30.6	D	1000	1075	D	ug/L		104	75 - 125	2	20
Beryllium	0.20	U D	100	100.4	D	ug/L		100	75 - 125	1	20
Cadmium	0.30	B D	1000	979.8	D	ug/L		98	75 - 125	1	20
Chromium	4.0	U D	1000	1023	D	ug/L		102	75 - 125	1	20
Cobalt	0.90	U D	1000	986.1	D	ug/L		99	75 - 125	0	20
Copper	0.65	B D C	1000	999.2	D	ug/L		100	75 - 125	1	20
Lead	1.3	B D	1000	974.1	D	ug/L		97	75 - 125	0	20
Manganese	104	D	1000	1061	D	ug/L		96	75 - 125	0	20
Molybdenum	3.9	B D	500	479.0	D	ug/L		95	75 - 125	0	20
Nickel	2.0	U D	1000	946.1	D	ug/L		95	75 - 125	1	20
Selenium	2.3	B D	500	502.3	D	ug/L		100	75 - 125	0	20
Silver	0.90	U D	200	200.8	D	ug/L		100	75 - 125	2	20
Strontium	201	D	1000	1136	D	ug/L		93	75 - 125	1	20
Thallium	0.90	U D	200	212.1	D	ug/L		106	75 - 125	1	20
Thorium	0.90	U D	1000	995.6	D	ug/L		100	75 - 125	0	20
Tin	1.2	U D	1000	1009	D	ug/L		101	75 - 125	2	20
Uranium	1.9	D	1000	986.8	D	ug/L		98	75 - 125	1	20
Zinc	10.1	B D	1000	955.1	D	ug/L		95	75 - 125	0	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 160-347359/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 347717 — **Prep Batch: 347359**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.060	U	0.20	0.060	ug/L		01/23/18 07:22	01/23/18 12:30	1

Lab Sample ID: LCS 160-347359/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 347717 — **Prep Batch: 347359**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	5.00	5.20		ug/L		104	80 - 120

Lab Sample ID: 160-26399-A-4-G MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 347717 — **Prep Batch: 347359**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.060	U	5.00	5.06		ug/L		101	80 - 120

Lab Sample ID: 160-26399-A-4-H MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 347717 — **Prep Batch: 347359**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.060	U	5.00	5.00		ug/L		100	80 - 120	1	20

Method: 310.1 - Alkalinity

Lab Sample ID: MB 160-347369/1 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 347369

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	0.54	U	5.0	0.54	mg/L			01/23/18 10:04	1
Bicarbonate Alkalinity	0.54	U	5.0	0.54	mg/L			01/23/18 10:04	1
Carbonate Alkalinity	0.54	U	5.0	0.54	mg/L			01/23/18 10:04	1
Hydroxide Alkalinity	0.54	U	5.0	0.54	mg/L			01/23/18 10:04	1

Lab Sample ID: HLCS 160-347369/3 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 347369

Analyte	Spike Added	HLCS Result	HLCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity	400	384.0		mg/L		96	90 - 110
Bicarbonate Alkalinity	400	384.0		mg/L		96	90 - 110

Lab Sample ID: LCS 160-347369/2 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 347369

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity	200	190.0		mg/L		95	90 - 110

Method: 310.1 - Alkalinity (Continued)

Lab Sample ID: LCS 160-347369/2 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 347369

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Bicarbonate Alkalinity			200	190.0		mg/L		95	90 - 110		

Lab Sample ID: 160-26399-A-6 MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 347369

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Alkalinity	103		100	200.0		mg/L		97	80 - 120		
Bicarbonate Alkalinity	103		100	200.0		mg/L		97	80 - 120		

Lab Sample ID: 160-26399-A-6 DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 347369

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Alkalinity	103			103.0		mg/L				0	20
Bicarbonate Alkalinity	103			103.0		mg/L				0	20
Carbonate Alkalinity	0.54	U		0.54	U	mg/L				NC	20
Hydroxide Alkalinity	0.54	U		0.54	U	mg/L				NC	20

Method: 9020B - Organic Halides, Total (TOX)

Lab Sample ID: MB 160-350461/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 350465 — **Prep Batch: 350461**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Halogens, Total Organic	2.59	B	5.0	2.1	ug/L		02/07/18 12:00	02/08/18 16:47	1

Lab Sample ID: LCS 160-350461/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 350465 — **Prep Batch: 350461**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Halogens, Total Organic			100	101.8		ug/L		102	90 - 116		

Lab Sample ID: 160-26418-6 MS — **Client Sample ID: B3FRH8**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 350465 — **Prep Batch: 350461**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Halogens, Total Organic	5.5	C	100	105.3		ug/L		100	85 - 117		

Lab Sample ID: 160-26418-6 DU — **Client Sample ID: B3FRH8**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 350465 — **Prep Batch: 350461**

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Halogens, Total Organic	5.5	C		5.60	C	ug/L				3	20

Method: 9020B - Organic Halides, Total (TOX) (Continued)

Lab Sample ID: MB 160-351367/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 351394 — **Prep Batch: 351367**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Halogens, Total Organic	2.1	U	5.0	2.1	ug/L		02/13/18 12:00	02/13/18 18:23	1

Lab Sample ID: LCS 160-351367/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 351394 — **Prep Batch: 351367**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Halogens, Total Organic	100	99.02		ug/L		99	90 - 116

Lab Sample ID: 160-26418-10 MS — **Client Sample ID: B3FRK0**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 351394 — **Prep Batch: 351367**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Halogens, Total Organic	2.1	U	100	101.1		ug/L		101	85 - 117

Lab Sample ID: 160-26418-10 DU — **Client Sample ID: B3FRK0**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 351394 — **Prep Batch: 351367**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Halogens, Total Organic	2.1	U	2.1	U	ug/L		NC	20

Method: 9060 - Organic Carbon, Total (TOC)

Lab Sample ID: MB 160-350074/4 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 350074

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	0.50	U	1.0	0.50	mg/L			02/06/18 15:52	1

Lab Sample ID: LCS 160-350074/5 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 350074

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	10.0	9.92		mg/L		99	90 - 110

Lab Sample ID: 160-26418-13 MS — **Client Sample ID: B3FRR0**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 350074

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	0.50	U	5.00	4.97		mg/L		99	76 - 120

Method: 9060 - Organic Carbon, Total (TOC) (Continued)

Lab Sample ID: 160-26356-B-1 DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 350074

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Organic Carbon	0.50	U		0.50	U	mg/L				NC	20

Method: 906.0 - Tritium, Total (LSC)

Lab Sample ID: MB 160-347320/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 347579 — **Prep Batch: 347320**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Tritium	-123	U	169	169	500	321	pCi/L	01/22/18 12:17	01/23/18 01:59	1

Lab Sample ID: LCS 160-347320/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 347579 — **Prep Batch: 347320**

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Tritium			2790	2315		376	500	299	pCi/L	83	80 - 120		

Lab Sample ID: 160-26404-A-18-B MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 347579 — **Prep Batch: 347320**

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Tritium	106000		2790	104000		9330	500	302	pCi/L	-81	75 - 125		

Lab Sample ID: 160-26404-C-9-B DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 347579 — **Prep Batch: 347320**

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit			RPD	RPD Limit
Tritium	64800			67070		6090	500	322	pCi/L			3	20

Method: SR-03-RC - Total Beta Strontium (GFPC)

Lab Sample ID: MB 160-347306/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 348446 — **Prep Batch: 347306**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Strontium 89/90	0.0288	U	0.120	0.120	2.00	0.212	pCi/L	01/22/18 10:57	01/29/18 05:56	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Sr Carrier	*39.6*	*X*	*40 - 110*	*01/22/18 10:57*	*01/29/18 05:56*	*1*

Method: SR-03-RC - Total Beta Strontium (GFPC) (Continued)

Lab Sample ID: LCS 160-347306/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 348446 — **Prep Batch: 347306**

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Strontium 89/90			8.31	6.943		0.569	2.00	0.102	pCi/L	84	80 - 120		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Sr Carrier	*89.1*		*40 - 110*

Lab Sample ID: LCSD 160-347306/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 348446 — **Prep Batch: 347306**

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RPD	RPD Limit
Strontium 89/90			8.31	6.705		0.560	2.00	0.110	pCi/L	81	80 - 120	3	20

Carrier	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Sr Carrier	*83.5*		*40 - 110*

Method: TC-02-RC - Technetium-99 (LSC)

Lab Sample ID: MB 160-348968/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 349646 — **Prep Batch: 348968**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Technetium-99	0.0191	U	1.21	1.21	3.00	2.06	pCi/L	01/31/18 09:07	02/04/18 14:15	1

Tracer	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tc-99m	*94.3*		*30 - 105*	*01/31/18 09:07*	*02/04/18 14:15*	*1*

Lab Sample ID: LCS 160-348968/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 349646 — **Prep Batch: 348968**

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Technetium-99			30.9	34.42		3.93	3.00	2.04	pCi/L	111	80 - 120		

Tracer	*LCS %Yield*	*LCS Qualifier*	*Limits*
Tc-99m	*95.3*		*30 - 105*

Method: TC-02-RC - Technetium-99 (LSC) (Continued)

Lab Sample ID: LCSD 160-348968/3-A
Matrix: Water
Analysis Batch: 349646

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 348968

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RPD	RPD Limit
Technetium-99			30.9	31.94		3.70	3.00	2.03	pCi/L	103	80 - 120	7	20

Tracer	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Tc-99m	*95.9*		*30 - 105*

QC Association Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: S18-001/X18-005/A18-001/I18-004/W18-001

TestAmerica Job ID: 160-26405-1
SDG: SL2792

GC/MS VOA

Analysis Batch: 348666

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-26405-8	B3HLB3	Total/NA	Water	8260C	
MB 160-348666/6	Method Blank	Total/NA	Water	8260C	
LCS 160-348666/3	Lab Control Sample	Total/NA	Water	8260C	
LCSD 160-348666/4	Lab Control Sample Dup	Total/NA	Water	8260C	
160-26405-8 MS	B3HLB3	Total/NA	Water	8260C	
160-26405-8 MSD	B3HLB3	Total/NA	Water	8260C	

GC/MS Semi VOA

Prep Batch: 347317

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-26418-6	B3FRH8	Total/NA	Water	3510C	
MB 160-347317/1-A	Method Blank	Total/NA	Water	3510C	
LCS 160-347317/2-A	Lab Control Sample	Total/NA	Water	3510C	
160-26399-J-6-A MS	Matrix Spike	Total/NA	Water	3510C	
160-26399-K-6-A MSD	Matrix Spike Duplicate	Total/NA	Water	3510C	

Analysis Batch: 350869

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-26418-6	B3FRH8	Total/NA	Water	8270D	347317
MB 160-347317/1-A	Method Blank	Total/NA	Water	8270D	347317
LCS 160-347317/2-A	Lab Control Sample	Total/NA	Water	8270D	347317
160-26399-J-6-A MS	Matrix Spike	Total/NA	Water	8270D	347317
160-26399-K-6-A MSD	Matrix Spike Duplicate	Total/NA	Water	8270D	347317

Metals

Prep Batch: 347310

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-26405-1	B3FWC3	Dissolved	Water	3010A	
160-26405-2	B3FXJ3	Total/NA	Water	3010A	
160-26405-4	B3FWC4	Dissolved	Water	3010A	
160-26405-5	B3FXJ2	Total/NA	Water	3010A	
160-26405-6	B3FYH2	Total/NA	Water	3010A	
160-26405-7	B3FX59	Dissolved	Water	3010A	
160-26418-4	B3FTN1	Dissolved	Water	3010A	
160-26418-5	B3FYC9	Total/NA	Water	3010A	
MB 160-347310/1-A	Method Blank	Total/NA	Water	3010A	
LCS 160-347310/2-A	Lab Control Sample	Total/NA	Water	3010A	
160-26399-A-2-B MS	Matrix Spike	Total/NA	Water	3010A	
160-26399-A-2-C MSD	Matrix Spike Duplicate	Total/NA	Water	3010A	

Prep Batch: 347311

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-26405-6	B3FYH2	Total/NA	Water	3010A	
160-26405-7	B3FX59	Dissolved	Water	3010A	
160-26418-4	B3FTN1	Dissolved	Water	3010A	
160-26418-5	B3FYC9	Total/NA	Water	3010A	
MB 160-347311/1-A	Method Blank	Total/NA	Water	3010A	
LCS 160-347311/2-A	Lab Control Sample	Total/NA	Water	3010A	

Metals (Continued)

Prep Batch: 347311 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-26399-A-2-E MS	Matrix Spike	Total/NA	Water	3010A	
160-26399-A-2-F MSD	Matrix Spike Duplicate	Total/NA	Water	3010A	

Prep Batch: 347359

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-26418-4	B3FTN1	Dissolved	Water	7470A	
160-26418-5	B3FYC9	Total/NA	Water	7470A	
MB 160-347359/1-A	Method Blank	Total/NA	Water	7470A	
LCS 160-347359/2-A	Lab Control Sample	Total/NA	Water	7470A	
160-26399-A-4-G MS	Matrix Spike	Total/NA	Water	7470A	
160-26399-A-4-H MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	

Analysis Batch: 347713

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-26405-6	B3FYH2	Total/NA	Water	6010C	347311
160-26405-7	B3FX59	Dissolved	Water	6010C	347311
160-26418-4	B3FTN1	Dissolved	Water	6010C	347311
160-26418-5	B3FYC9	Total/NA	Water	6010C	347311
MB 160-347311/1-A	Method Blank	Total/NA	Water	6010C	347311
LCS 160-347311/2-A	Lab Control Sample	Total/NA	Water	6010C	347311
160-26399-A-2-E MS	Matrix Spike	Total/NA	Water	6010C	347311
160-26399-A-2-F MSD	Matrix Spike Duplicate	Total/NA	Water	6010C	347311

Analysis Batch: 347717

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-26418-4	B3FTN1	Dissolved	Water	7470A	347359
160-26418-5	B3FYC9	Total/NA	Water	7470A	347359
MB 160-347359/1-A	Method Blank	Total/NA	Water	7470A	347359
LCS 160-347359/2-A	Lab Control Sample	Total/NA	Water	7470A	347359
160-26399-A-4-G MS	Matrix Spike	Total/NA	Water	7470A	347359
160-26399-A-4-H MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	347359

Analysis Batch: 348796

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-26405-1	B3FWC3	Dissolved	Water	6020A	347310
160-26405-2	B3FXJ3	Total/NA	Water	6020A	347310
160-26405-4	B3FWC4	Dissolved	Water	6020A	347310
160-26405-5	B3FXJ2	Total/NA	Water	6020A	347310
160-26405-6	B3FYH2	Total/NA	Water	6020A	347310
160-26405-7	B3FX59	Dissolved	Water	6020A	347310
160-26418-4	B3FTN1	Dissolved	Water	6020A	347310
160-26418-5	B3FYC9	Total/NA	Water	6020A	347310
MB 160-347310/1-A	Method Blank	Total/NA	Water	6020A	347310
LCS 160-347310/2-A	Lab Control Sample	Total/NA	Water	6020A	347310
160-26399-A-2-B MS	Matrix Spike	Total/NA	Water	6020A	347310
160-26399-A-2-C MSD	Matrix Spike Duplicate	Total/NA	Water	6020A	347310

QC Association Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: S18-001/X18-005/A18-001/I18-004/W18-001

TestAmerica Job ID: 160-26405-1
SDG: SL2792

General Chemistry

Analysis Batch: 347369

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-26418-5	B3FYC9	Total/NA	Water	310.1	
160-26418-6	B3FRH8	Total/NA	Water	310.1	
MB 160-347369/1	Method Blank	Total/NA	Water	310.1	
HLCS 160-347369/3	Lab Control Sample	Total/NA	Water	310.1	
LCS 160-347369/2	Lab Control Sample	Total/NA	Water	310.1	
160-26399-A-6 MS	Matrix Spike	Total/NA	Water	310.1	
160-26399-A-6 DU	Duplicate	Total/NA	Water	310.1	

Analysis Batch: 350074

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-26418-6	B3FRH8	Total/NA	Water	9060	
160-26418-7	B3FV04	Total/NA	Water	9060	
160-26418-8	B3FV05	Total/NA	Water	9060	
160-26418-9	B3FV06	Total/NA	Water	9060	
160-26418-10	B3FRK0	Total/NA	Water	9060	
160-26418-11	B3FRP9	Total/NA	Water	9060	
160-26418-12	B3FRP8	Total/NA	Water	9060	
160-26418-13	B3FRR0	Total/NA	Water	9060	
MB 160-350074/4	Method Blank	Total/NA	Water	9060	
LCS 160-350074/5	Lab Control Sample	Total/NA	Water	9060	
160-26418-13 MS	B3FRR0	Total/NA	Water	9060	
160-26356-B-1 DU	Duplicate	Total/NA	Water	9060	

Prep Batch: 350461

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-26418-6	B3FRH8	Total/NA	Water	Carbon Trap	
160-26418-7	B3FV04	Total/NA	Water	Carbon Trap	
160-26418-8	B3FV05	Total/NA	Water	Carbon Trap	
160-26418-9	B3FV06	Total/NA	Water	Carbon Trap	
MB 160-350461/1-A	Method Blank	Total/NA	Water	Carbon Trap	
LCS 160-350461/2-A	Lab Control Sample	Total/NA	Water	Carbon Trap	
160-26418-6 MS	B3FRH8	Total/NA	Water	Carbon Trap	
160-26418-6 DU	B3FRH8	Total/NA	Water	Carbon Trap	

Analysis Batch: 350465

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-26418-6	B3FRH8	Total/NA	Water	9020B	350461
160-26418-7	B3FV04	Total/NA	Water	9020B	350461
160-26418-8	B3FV05	Total/NA	Water	9020B	350461
160-26418-9	B3FV06	Total/NA	Water	9020B	350461
MB 160-350461/1-A	Method Blank	Total/NA	Water	9020B	350461
LCS 160-350461/2-A	Lab Control Sample	Total/NA	Water	9020B	350461
160-26418-6 MS	B3FRH8	Total/NA	Water	9020B	350461
160-26418-6 DU	B3FRH8	Total/NA	Water	9020B	350461

Prep Batch: 351367

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-26418-10	B3FRK0	Total/NA	Water	Carbon Trap	
160-26418-11	B3FRP9	Total/NA	Water	Carbon Trap	
160-26418-12	B3FRP8	Total/NA	Water	Carbon Trap	
160-26418-13	B3FRR0	Total/NA	Water	Carbon Trap	

General Chemistry (Continued)

Prep Batch: 351367 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 160-351367/1-A	Method Blank	Total/NA	Water	Carbon Trap	
LCS 160-351367/2-A	Lab Control Sample	Total/NA	Water	Carbon Trap	
160-26418-10 MS	B3FRK0	Total/NA	Water	Carbon Trap	
160-26418-10 DU	B3FRK0	Total/NA	Water	Carbon Trap	

Analysis Batch: 351394

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-26418-10	B3FRK0	Total/NA	Water	9020B	351367
160-26418-11	B3FRP9	Total/NA	Water	9020B	351367
160-26418-12	B3FRP8	Total/NA	Water	9020B	351367
160-26418-13	B3FRR0	Total/NA	Water	9020B	351367
MB 160-351367/1-A	Method Blank	Total/NA	Water	9020B	351367
LCS 160-351367/2-A	Lab Control Sample	Total/NA	Water	9020B	351367
160-26418-10 MS	B3FRK0	Total/NA	Water	9020B	351367
160-26418-10 DU	B3FRK0	Total/NA	Water	9020B	351367

Rad

Prep Batch: 347306

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-26405-2	B3FXJ3	Total/NA	Water	PrecSep_0	
160-26405-5	B3FXJ2	Total/NA	Water	PrecSep_0	
MB 160-347306/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-347306/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-347306/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

Prep Batch: 347320

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-26405-2	B3FXJ3	Total/NA	Water	LSC_Dist_Susp	
160-26405-5	B3FXJ2	Total/NA	Water	LSC_Dist_Susp	
160-26418-3	B3FWF7	Total/NA	Water	LSC_Dist_Susp	
MB 160-347320/1-A	Method Blank	Total/NA	Water	LSC_Dist_Susp	
LCS 160-347320/2-A	Lab Control Sample	Total/NA	Water	LSC_Dist_Susp	
160-26404-A-18-B MS	Matrix Spike	Total/NA	Water	LSC_Dist_Susp	
160-26404-C-9-B DU	Duplicate	Total/NA	Water	LSC_Dist_Susp	

Prep Batch: 348968

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-26405-3	B3FY22	Total/NA	Water	Ext_Chrom_LSC	
160-26418-1	B3FY19	Total/NA	Water	Ext_Chrom_LSC	
160-26418-2	B3FPN0	Total/NA	Water	Ext_Chrom_LSC	
MB 160-348968/1-A	Method Blank	Total/NA	Water	Ext_Chrom_LSC	
LCS 160-348968/2-A	Lab Control Sample	Total/NA	Water	Ext_Chrom_LSC	
LCSD 160-348968/3-A	Lab Control Sample Dup	Total/NA	Water	Ext_Chrom_LSC	

Surrogate Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: S18-001/X18-005/A18-001/I18-004/W18-001

TestAmerica Job ID: 160-26405-1
SDG: SL2792

Method: 8260C - Volatile Organic Compounds (GC/MS)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(75-129)	(81-130)	(81-124)	(87-128)
160-26405-8	B3HLB3	101	91	98	95
160-26405-8 MS	B3HLB3	99	89	98	93
160-26405-8 MSD	B3HLB3	98	90	99	94
LCS 160-348666/3	Lab Control Sample	102	87	99	91
LCSD 160-348666/4	Lab Control Sample Dup	98	88	98	93
MB 160-348666/6	Method Blank	100	89	96	93

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)					
		TBP	FBP	2FP	NBZ	PHL	TPHL
Lab Sample ID	Client Sample ID	(37-120)	(43-108)	(15-59)	(50-101)	(10-50)	(21-97)
160-26399-J-6-A MS	Matrix Spike	82	79	42	75	29	77
160-26399-K-6-A MSD	Matrix Spike Duplicate	78	78	43	75	29	76
160-26418-6	B3FRH8	86	78	39	77	26	88
LCS 160-347317/2-A	Lab Control Sample	83	76	44	76	30	86
MB 160-347317/1-A	Method Blank	86	76	44	74	31	93

Surrogate Legend

TBP = 2,4,6-Tribromophenol (Surr)
FBP = 2-Fluorobiphenyl (Surr)
2FP = 2-Fluorophenol (Surr)
NBZ = Nitrobenzene-d5 (Surr)
PHL = Phenol-d5 (Surr)
TPHL = Terphenyl-d14 (Surr)

Tracer/Carrier Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: S18-001/X18-005/A18-001/I18-004/W18-001

TestAmerica Job ID: 160-26405-1
SDG: SL2792

Method: SR-03-RC - Total Beta Strontium (GFPC)

Matrix: Water **Prep Type: Total/NA**

Lab Sample ID	Client Sample ID	Sr Carrier (40-110)
160-26405-2	B3FXJ3	86.2
160-26405-5	B3FXJ2	78.1
LCS 160-347306/2-A	Lab Control Sample	89.1
LCSD 160-347306/3-A	Lab Control Sample Dup	83.5
MB 160-347306/1-A	Method Blank	39.6 X

Percent Yield (Acceptance Limits)

Tracer/Carrier Legend

Sr Carrier = Sr Carrier

Method: TC-02-RC - Technetium-99 (LSC)

Matrix: Water **Prep Type: Total/NA**

Lab Sample ID	Client Sample ID	Tc-99m (30-105)
160-26405-3	B3FY22	101
160-26418-1	B3FY19	98.8
160-26418-2	B3FPN0	99.5
LCS 160-348968/2-A	Lab Control Sample	95.3
LCSD 160-348968/3-A	Lab Control Sample Dup	95.9
MB 160-348968/1-A	Method Blank	94.3

Percent Yield (Acceptance Limits)

Tracer/Carrier Legend

Tc-99m = Tc-99m