July 7, 2017

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Denver
4955 Yarrow Street
Arvada, CO 80002
Tel: (303)736-0100

TestAmerica Job ID: 280-97923-1
TestAmerica Sample Delivery Group: DN0147
Client Project/Site: FRC16-03

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

Attn: Mr. Scot Fitzgerald

Darlene Bandy

Authorized for release by:
7/7/2017 4:47:30 PM

Darlene Bandy, Project Manager I
(303)736-0100
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LINKS

Review your project results through TotalAccess

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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: 280-97923-1

Laboratory: TestAmerica Denver

Narrative

CASE NARRATIVE

Client: CH2M Hill Plateau Remediation Company

Job Number: 280-97923-1

SDG #: DN0147
SAF#(s): FRC16-03

Date SDG Closed: June 7, 2017
Data Deliverable: 30 Day / Summary

With exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. All laboratory quality control samples analyzed in conjunction with the samples in this project were within established control limits, with any exceptions noted. Calculations are performed before rounding to avoid round-off errors in calculated results.

LCS/LCSD = Laboratory Control Sample/Laboratory Control Sample Duplicate
MS/MSD = Matrix Spike/Matrix Spike Duplicate

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

For volatile organic and extractable analyses, the laboratory is not able to achieve project specified QC limits for several analytes. Per CHPRC direction, data have been evaluated using laboratory statistical limits in lieu of project specified limits. All analytes met laboratory statistical limits, unless otherwise detailed in the individual sections below.

RECEIPT
The samples were received on 6/6/2017 9:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 1.1º C and 1.1º C.

Receipt Exceptions
All VOA vials for sample B3B8B1 (280-97923-1) contained bubbles greater than 6mm in diameter. Please note, analytical results may be biased low due to headspace. As instructed by the client, the laboratory proceeded with analysis (SIR17-741).

None of the VOA vials had sample labels affixed directly to the vials for sample B3B8B1 (280-97923-1). It can be noted that a label with sample ID was affixed to the bubble bag that contained these VOA vials. As instructed by the client, the laboratory proceeded with analysis (SIR17-741).

VOLATILE ORGANIC COMPOUNDS (GC-MS)
Samples B3B8B1 (280-97923-1), B3B8B0 (280-97923-2) and B3B8B5 (280-97923-3) were analyzed for volatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 06/11/2017.

No analytical or quality issues were noted.

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)
Samples B3B8B0 (280-97923-2) and B3B8B5 (280-97923-3) were analyzed for semivolatile organic compounds (GC-MS) in accordance with SW-846 8270D. The samples were prepared on 06/12/2017 and analyzed on 06/22/2017.

No analytical or quality issues were noted.

Job ID: 280-97923-1 (Continued)

Laboratory: TestAmerica Denver (Continued)

TOTAL METALS (ICP)
Samples B3B8B0 (280-97923-2) and B3B8B5 (280-97923-3) were analyzed for Total Metals (ICP) in accordance with EPA SW-846 Method 6010C. The samples were prepared on 06/12/2017 and analyzed on 06/12/2017 and 06/14/2017.

The accuracy and precision of Calcium in the MS/MSD performed on sample B3B8B0 (280-97923-2) in prep batch 376763 could not be reliably calculated due to the sample concentration reading greater than four times the spike amount. Control limits are not applicable and the MS/MSD results have been flagged “X”.

The MSD aliquot of the MS/MSD performed on sample B3B8B0 (280-97923-2) in prep batch 376763 exhibited percent recoveries outside the control limits for Potassium and Sodium, and associated sample results have been flagged “N”. There is no indication that the analytical system was operating out of control, and method accuracy has been verified by the acceptable LCS analysis data; therefore, corrective action is deemed unnecessary.

No additional analytical or quality issues were noted.

TOTAL METALS (ICPMS)
Samples B3B8B0 (280-97923-2) and B3B8B5 (280-97923-3) were analyzed for total metals (ICPMS) in accordance with SW846 6020A. The samples were prepared on 06/20/2017 and analyzed on 06/21/2017.

The accuracy and precision of Chromium and Uranium in the MS/MSD performed on sample B3B8B0 (280-97923-2) in prep batch 376764 could not be reliably calculated due to the sample concentration reading greater than four times the spike amount. Control limits are not applicable and the MS/MSD results have been flagged “X”.

No additional analytical or quality issues were noted.

ALKALINITY
Samples B3B8B0 (280-97923-2) and B3B8B5 (280-97923-3) were analyzed for Alkalinity in accordance with SM20 2320B. The samples were analyzed on 06/09/2017.

Alkalinity as CaCO3 was detected in method blank MB 280-376805/31 at a level that was above the method detection limit (MDL) but below the reporting limit (RL). The value should be considered an estimate, and has been flagged “B”. Because the concentration in the method blank was not present at a level greater than the RL, corrective action is deemed unnecessary. If the associated samples reported a result above the MDL and/or RL and the method blank concentration was greater than 5% of the sample concentration, the result has been flagged “C”.

No additional analytical or quality issues were noted.

TOTAL DISSOLVED SOLIDS
Samples B3B8B0 (280-97923-2) and B3B8B5 (280-97923-3) were analyzed for total dissolved solids in accordance with SM20 2540C. The samples were analyzed on 06/09/2017.

No analytical or quality issues were noted.

TOTAL SUSPENDED SOLIDS
Samples B3B8B0 (280-97923-2) and B3B8B5 (280-97923-3) were analyzed for total suspended solids in accordance with SM20 2540D. The samples were analyzed on 06/08/2017.

No analytical or quality issues were noted.

AMMONIA
Samples B3B8B0 (280-97923-2) and B3B8B5 (280-97923-3) were analyzed for ammonia in accordance with EPA Method 350.1. The samples were analyzed on 06/28/2017.

No analytical or quality issues were noted.

Job ID: 280-97923-1 (Continued)

Laboratory: TestAmerica Denver (Continued)

NITRATE-NITRITE AS NITROGEN

Samples B3B8B0 (280-97923-2) and B3B8B5 (280-97923-3) were analyzed for Nitrate-Nitrite as nitrogen in accordance with EPA Method 353.2. The samples were analyzed on 06/23/2017.

Due to high constituent concentration, samples B3B8B0 (280-97923-2)[5X] and B3B8B5 (280-97923-3)[5X] required dilution prior to analysis, and the associated results have been flagged “D”. The reporting limits have been adjusted relative to the dilutions required.

Due to the high concentration of Nitrate-Nitrite as nitrogen, the MS/MSD performed on sample B3B8B0 (280-97923-2) in analytical batch 378579 could not be evaluated for accuracy and precision. The MS/MSD results were over the calibration range, and have been flagged "X". The result for sample B3B8B0 (280-97923-2) was within the calibration range, and the associated laboratory control sample (LCS) met acceptance criteria.

No additional analytical or quality issues were noted.

CHEMICAL OXYGEN DEMAND

Samples B3B8B0 (280-97923-2) and B3B8B5 (280-97923-3) were analyzed for chemical oxygen demand in accordance with EPA Method 410.4. The samples were analyzed on 06/22/2017.

Due to matrix, samples B3B8B0 (280-97923-2)[5X] and B3B8B5 (280-97923-3)[5X] required dilution prior to analysis, and the associated results have been flagged “D”. The reporting limits have been adjusted relative to the dilutions required.

Chemical Oxygen Demand was detected in method blank MB 280-378355/36 at a level that was above the method detection limit (MDL) but below the reporting limit (RL). The value should be considered an estimate, and has been flagged “B”. Because the concentration in the method blank was not present at a level greater than half the RL, corrective action is deemed unnecessary. If the associated samples reported a result above the MDL and/or RL and the method blank concentration was greater than 5% of the sample concentration, the result has been flagged “C”.

No additional analytical or quality issues were noted.

TOTAL ORGANIC HALIDES

Samples B3B8B0 (280-97923-2) and B3B8B5 (280-97923-3) were analyzed for total organic halides in accordance with EPA SW846 Method 9020B. The samples were analyzed on 06/21/2017 and 06/28/2017.

Breakthrough exceeded 10% for the following samples: B3B8B0 (280-97923-2) and B3B8B5 (280-97923-3). Reanalysis at a dilution or higher dilution to minimize the breakthrough was not performed in order to maintain the client required reporting limit (RL).

The following sample for method 9020B was originally analyzed in batch 378394; however, a difference in TOX results greater than 20% between the duplicate analyses was found: B3B8B0 (280-97923-2). The difference may be related to matrix interference. In order to minimize matrix interference, this sample was analyzed at a 2x dilution, along with an MS/MSD, and the associated results have been flagged "D". The reporting limits have been adjusted accordingly. The dilutions were in the form of a lower initial volume; therefore, a dilution factor is not present. A dilution factor will be added to the EDD.

The MSD aliquot of the MS/MSD performed on sample B3B8B0 (280-97923-2) in analysis batch 379308 exhibited percent recoveries outside the control limits, and associated sample result has been flagged “N”. The acceptable LCS analysis data indicated that the analytical system was operating within control; therefore, corrective action is deemed unnecessary.

The accuracy and precision of TOX in the MS/MSD performed on sample B39JH0 (280-97843-1) [SDG DN0145] in analysis batch 378394 could not be reliably calculated due to the sample concentration reading greater than four times the spike amount. Control limits are not applicable and the MS/MSD results have been flagged “X”. The following sample in this SDG is impacted: B3B8B5 (280-97923-3).

No additional analytical or quality issues were noted.

CORROSIVITY (PH)

Samples B3B8B0 (280-97923-2) and B3B8B5 (280-97923-3) were analyzed for Corrosivity (pH) in accordance with EPA SW-846 9040C. The samples were analyzed on 06/27/2017.

Job ID: 280-97923-1 (Continued)

Laboratory: TestAmerica Denver (Continued)

No analytical or quality issues were noted.

SPECIFIC CONDUCTIVITY

Samples B3B8B0 (280-97923-2) and B3B8B5 (280-97923-3) were analyzed for specific conductivity in accordance with SW846 9050A. The samples were analyzed on 06/23/2017.

No analytical or quality issues were noted.

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:

Darlene Bandy
Project Manager

SAMPLE ISSUE RESOLUTION

SIR NUM	SIR17-741
REV NUM	0
DATE INITIATED	6/7/2017

SAMPLE EVENT INFORMATION

SAF NUM(S)	FRC16-03
OPERABLE UNIT(S)	
PROJECT(S)	ERDF Leachate
SAMPLE EVENT TITLE(S)	ERDF Leachate Sampling
LABORATORY	TestAmerica Denver

SAMPLING INFORMATION

NUMBER OF SAMPLES	1
SAMPLE NUMBERS	B3B8B1
SAMPLE MATRIX	WATER
COLLECTION DATE	-
SDG NUM	DN0147

ISSUE BACKGROUND

CLASS	Field Sampling Issue
TYPE	Insufficient Sample Volume Collected
DESCRIPTION	All VOA vials contain bubbles greater than 6mm in diameter. Please note that analytical results may be biased low due to headspace. In addition, none of the VOA vials had sample labels affixed directly to the vials. It can be noted that a label with sample ID was affixed to the bubble bag that contained the VOA

DISPOSITION

DESCRIPTION	TADN PROPOSES TO proceed with analysis, or cancel analysis.
JUSTIFICATION	Final Disposition: Accept proposed resolution to analyze and note in the narative.

SUBMITTED BY: Darlene Bandy DATE: 06/07/2017
ACCEPTED BY: Heather Medley DATE: 06/07/2017

Login Sample Receipt Checklist

Client: CH2M Hill Plateau Remediation Company

Job Number: 280-97923-1
SDG Number: DN0147

Login Number: 97923
List Number: 1
Creator: Pottruff, Reed W

List Source: TestAmerica Denver

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	1.1°C, 1.1°C
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.	False	Refer to Job Narrative for details.
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").	False	Refer to Job Narrative for details.
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			FRC16-03-019	PAGE 1 OF 1
COLLECTOR: M. Downing (Dw0147)	COMPANY CONTACT: MEDLEY, HA	TELEPHONE NO.: 373-6909	PROJECT COORDINATOR: MEDLEY, HA	PRICE CODE: 7H	DATA TURNAROUND
SAMPLING LOCATION: ERDF LEACHATE FXR	PROJECT DESIGNATION: ERDF Leachate Quarterly Sampling - water		SAF NO.: FRC16-03	AIR QUALITY: ☐	30 Days / 30 Days
ICE CHEST NO.: ERC-02-007	FIELD LOGBOOK NO.: HNF-N-876 1	ACTUAL SAMPLE DEPTH: N/A	COA: 304121	METHOD OF SHIPMENT: FEDERAL EXPRESS	ORIGINAL
SHIPPED TO: TestAmerica Denver	OFFSITE PROPERTY NO.: PTR# 7990		BILL OF LADING/AIR BILL NO.: Fed Ex 7793 8440 4518		

MATRIX*
A=Air
DL=Drum Liquids
DS=Drum Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegetation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS
*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 HANDLING AND/OR STORAGE
NA

PRESERVATION	HCl or H2SO4 to pH <2/Cool
HOLDING TIME	14 Days
TYPE OF CONTAINER	aGs*
NO. OF CONTAINER(S)	4
VOLUME	40mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B3B8B1	WATER	6-5-17	0630	✓

280-97923 Chain of Custody

1.1,1.1 IR#70.0 Transfer RP 6-6-17

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM: M Downing / M. Downing	DATE/TIME: 6-5-17 0845	RECEIVED BY/STORED IN: T.R. Edmundson / T.R. Edmundson 6-5-17	DATE/TIME: 0845
RELINQUISHED BY/REMOVED FROM: PRC T.R. Edmundson / T.R. Edmundson 6-5-17	DATE/TIME: 1500	RECEIVED BY/STORED IN: Fed Ex 6-5-17	DATE/TIME: —
RELINQUISHED BY/REMOVED FROM: FedEx	DATE/TIME:	RECEIVED BY/STORED IN: Reed Pottruff / Reed Pottruff 6-6-17	DATE/TIME: 0930
RELINQUISHED BY/REMOVED FROM	DATE/TIME:	RECEIVED BY/STORED IN	DATE/TIME:
RELINQUISHED BY/REMOVED FROM	DATE/TIME:	RECEIVED BY/STORED IN	DATE/TIME:
RELINQUISHED BY/REMOVED FROM	DATE/TIME:	RECEIVED BY/STORED IN	DATE/TIME:
RELINQUISHED BY/REMOVED FROM	DATE/TIME:	RECEIVED BY/STORED IN	DATE/TIME:

SPECIAL INSTRUCTIONS
(1) 8260_VOA_GCMS: COMMON {Carbon tetrachloride, Trichloroethene};

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

PRINTED ON 5/18/2017 FSR ID = FSR45471 TRVL NUM = TRVL-17-140 A-6003-618 (REV 2)

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	FRC16-03-018	PAGE 1 OF 2

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 7H	DATA TURNAROUND
M. Downing DN0147	MEDLEY, HA	373-6909	MEDLEY, HA		
SAMPLING LOCATION	**PROJECT DESIGNATION**		**SAF NO.**	**AIR QUALITY** ☐	30 Days / 30 Days
ERDF LEACHATE	ERDF Leachate Quarterly Sampling - water		FRC16-03		
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**ACTUAL SAMPLE DEPTH**	**COA**	**METHOD OF SHIPMENT**	ORIGINAL
ERC-02-007	HNF-N-876 1	N/A	304121	FEDERAL EXPRESS	
SHIPPED TO	**OFFSITE PROPERTY NO.**		**BILL OF LADING/AIR BILL NO.**		
TestAmerica Denver	PTR # 7990		Fed Ex 7793 0440 4518		

MATRIX*
A=Air
DL=Drum Liquids
DS=Drum Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegetation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS
*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 HANDLING AND/OR STORAGE
NA

PRESERVATION	HNO3 to pH <2	HCl or H2SO4 to pH <2/Cool	Cool <=6C	H2SO4 to pH <2/Cool <=6C	H2SO4 to pH <2/Cool <=6C	Cool <=6C	Cool <=6C
HOLDING TIME	6 Months	14 Days	7 Days	28 Days	28 Days	7/40 Days	28 Days
TYPE OF CONTAINER	G/P	aGs*	P	G/P	aGs*	aG	P
NO. OF CONTAINER(S)	1	4	1	2	~~2~~ 1 TRB 6-5-17	4	1
VOLUME	500mL	40mL	1L	250mL	~~500mL~~ 1L	1L	250mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	SEE ITEM (4) IN SPECIAL INSTRUCTIONS	9020_TOX: COMMON;	SEE ITEM (5) IN SPECIAL INSTRUCTIONS	SEE ITEM (6) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME							
B3B8B0	WATER	6-5-17	0750	✓	✓	✓	✓	✓	✓	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
M. Downing / M. Downing	6-5-17 0845	T.R. Edmundson / T.R. Edmundson 6-5-17	0845
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
T.R. Edmundson / T.R. Edmundson 6-5-17	1500	Fed Ex 6-5-17	—
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
FedEx		Reed Pettruff / Reed Pettruff 6-6-17	0930
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

PRINTED ON 5/18/2017 FSR ID = FSR45470 TRVL NUM = TRVL-17-140 A-6003-618 (REV 2)

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			FRC16-03-018	PAGE 2 OF 2
COLLECTOR M. Downing DN0147	COMPANY CONTACT MEDLEY, HA	TELEPHONE NO. 373-6909	PROJECT COORDINATOR MEDLEY, HA	PRICE CODE 7H	DATA TURNAROUND
SAMPLING LOCATION ERDF LEACHATE	PROJECT DESIGNATION ERDF Leachate Quarterly Sampling - water		SAF NO. FRC16-03	AIR QUALITY ☐	30 Days / 30 Days
ICE CHEST NO. ERC-02-007	FIELD LOGBOOK NO. HNF-N-876 1	ACTUAL SAMPLE DEPTH N/A	COA 304121	METHOD OF SHIPMENT FEDERAL EXPRESS	ORIGINAL
SHIPPED TO TestAmerica Denver	OFFSITE PROPERTY NO. PTR # 7990		BILL OF LADING/AIR BILL NO. Fed Ex 7793 0440 4518		

SPECIAL INSTRUCTIONS

(1) 6010_METALS_ICP: COMMON {Calcium, Potassium, Sodium}; 6010_METALS_ICP: COMMON (Add-on) {Silicon}; 6020_METALS_ICPMS: COMMON {Arsenic, Barium, Beryllium, Chromium, Lead, Selenium}; 6020_METALS_ICPMS: COMMON (Add-on) {Thallium, Tin, Tungsten, Uranium, Vanadium, Zinc};
(2) 8260_VOA_GCMS: COMMON {Carbon tetrachloride, Trichloroethene};
(3) 2540C_TDS: COMMON; 2540D_TSS: COMMON; 2320_ALKALINITY: COMMON;
(4) 350.1_AMMONIA: COMMON; 353.2_NO2/NO3: COMMON; 410.4_COD: COMMON;
(5) 8270_SVOA_GCMS: COMMON (Add-on) {1,2-Diphenylhydrazine};
(6) 9050_CONDUCTIVITY: COMMON; 9040_pH (AQUEOUS): COMMON;

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			FRC16-03-023	PAGE 1 OF 2
COLLECTOR M. Downing DN0147	COMPANY CONTACT MEDLEY, HA	TELEPHONE NO. 373-6909	PROJECT COORDINATOR MEDLEY, HA	PRICE CODE 7H	DATA TURNAROUND
SAMPLING LOCATION ERDF LEACHATE DUP	PROJECT DESIGNATION ERDF Leachate Quarterly Sampling - water		SAF NO. FRC16-03	AIR QUALITY ☐	30 Days / 30 Days
ICE CHEST NO. ERC-02-007	FIELD LOGBOOK NO. HNF-N-876 1	ACTUAL SAMPLE DEPTH N/A	COA 304121	METHOD OF SHIPMENT FEDERAL EXPRESS	ORIGINAL
SHIPPED TO TestAmerica Denver	OFFSITE PROPERTY NO. PTR# 7990		BILL OF LADING/AIR BILL NO. Fed Ex 7793 0440 4518		

MATRIX*
A=Air
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DS=Drum Solids
L=Liquid
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S=Soil
SE=Sediment
T=Tissue
V=Vegetation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS
*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 HANDLING AND/OR STORAGE
NA

PRESERVATION	HNO3 to pH <2	HCl or H2SO4 to pH <2/Cool	Cool <=6C	H2SO4 to pH <2/Cool <=6C	H2SO4 to pH <2/Cool <=6C	Cool <=6C	Cool <=6C
HOLDING TIME	6 Months	14 Days	7 Days	28 Days	28 Days	7/40 Days	28 Days
TYPE OF CONTAINER	G/P	aGs*	P	G/P	aGs*	aG	P
NO. OF CONTAINER(S)	1	4	1	2	~~2~~ 1	4	1
VOLUME	500mL	40mL	1L	250mL	~~500mL~~ 1L	1L	250mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	SEE ITEM (4) IN SPECIAL INSTRUCTIONS	9020_TOX: COMMON;	SEE ITEM (5) IN SPECIAL INSTRUCTIONS	SEE ITEM (6) IN SPECIAL INSTRUCTIONS

Tria 6-5-17

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME							
B3B8B5	WATER	6-5-17	0750	✓	✓	✓	✓	✓	✓	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM M. Downing / M. Downing	DATE/TIME 6-5-17 0845	RECEIVED BY/STORED IN T.R. Edmundson / T.R. Edmundson 6-5-17	DATE/TIME 0845	SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM T.R. Edmundson / T.R. Edmundson 6-5-17	DATE/TIME 1500	RECEIVED BY/STORED IN Fed Ex 6-5-17	DATE/TIME —	
RELINQUISHED BY/REMOVED FROM Fed Ex	DATE/TIME	RECEIVED BY/STORED IN Reed Pott / Reed Pottruff 6-6-17	DATE/TIME 0930	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

PRINTED ON 5/18/2017 FSR ID = FSR45472 TRVL NUM = TRVL-17-140 A-6003-618 (REV 2)

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			FRC16-03-023	PAGE 2 OF 2
COLLECTOR M. Downing DW0147	COMPANY CONTACT MEDLEY, HA	TELEPHONE NO. 373-6909	PROJECT COORDINATOR MEDLEY, HA	PRICE CODE 7H	DATA TURNAROUND
SAMPLING LOCATION ERDF LEACHATE DUP	PROJECT DESIGNATION ERDF Leachate Quarterly Sampling - water		SAF NO. FRC16-03	AIR QUALITY ☐	30 Days / 30 Days
ICE CHEST NO. ERC-02-007	FIELD LOGBOOK NO. HNF-N-876 1	ACTUAL SAMPLE DEPTH N/A	COA 304121	METHOD OF SHIPMENT FEDERAL EXPRESS	ORIGINAL
SHIPPED TO TestAmerica Denver	OFFSITE PROPERTY NO. PTR# 7990		BILL OF LADING/AIR BILL NO. Fed Ex 7793 0440 4518		

SPECIAL INSTRUCTIONS

(1) 6010_METALS_ICP: COMMON {Calcium, Potassium, Sodium}; 6010_METALS_ICP: COMMON (Add-on) {Silicon}; 6020_METALS_ICPMS: COMMON {Arsenic, Barium, Beryllium, Chromium, Lead, Selenium}; 6020_METALS_ICPMS: COMMON (Add-on) {Thallium, Tin, Tungsten, Uranium, Vanadium, Zinc};
(2) 8260_VOA_GCMS: COMMON {Carbon tetrachloride, Trichloroethene};
(3) 2540C_TDS: COMMON; 2540D_TSS: COMMON; 2320_ALKALINITY: COMMON;
(4) 350.1_AMMONIA: COMMON; 353.2_NO2/NO3: COMMON; 410.4_COD: COMMON;
(5) 8270_SVOA_GCMS: COMMON (Add-on) {1,2-Diphenylhydrazine};
(6) 9050_CONDUCTIVITY: COMMON; 9040_pH (AQUEOUS): COMMON;

IMPORTANT!
Hurricane Season Readiness. Learn More

FedEx ® Tracking

779304404518

Ship date:		Actual delivery:
Mon 6/05/2017		**Tue 6/06/2017 9:25 am**
Richland, WA US	**Delivered** *Signed for by: R.DRUETT*	ARVADA, CO US

2 Piece shipment

Travel History

Date/Time	Activity	Location
6/06/2017 - Tuesday		
9:25 am	Delivered	ARVADA, CO
8:40 am	On FedEx vehicle for delivery	ARVADA, CO
7:56 am	At local FedEx facility	ARVADA, CO
5:11 am	At destination sort facility	DENVER, CO
4:16 am	Departed FedEx location	MEMPHIS, TN
12:23 am	Arrived at FedEx location	MEMPHIS, TN
6/05/2017 - Monday		
5:00 pm	Left FedEx origin facility	PASCO, WA
3:35 pm	Shipment information sent to FedEx	
3:26 pm	Picked up	PASCO, WA

Shipment Facts

Tracking number	779304404518	**Service**	FedEx Priority Overnight
Master tracking number	779304404518	**Weight**	81 lbs / 36.74 kgs
Delivered To	Shipping/Receiving	**Total pieces**	2
Total shipment weight	165 lbs / 74.84 kgs	**Terms**	Third Party
Shipper reference	CACN-304121	**Packaging**	Your Packaging
Special handling section	Deliver Weekday	**Standard transit**	6/06/2017 by 10:30 am

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FedEx ® Tracking

779304404448

Ship date:		Actual delivery:
Mon 6/05/2017		**Tue 6/06/2017 9:25 am**
Richland, WA US	**Delivered** *Signed for by: R.DRUETT*	ARVADA, CO US

2 Piece shipment

Travel History

Date/Time	Activity	Location
6/06/2017 - Tuesday		
9:25 am	Delivered	ARVADA, CO
8:40 am	On FedEx vehicle for delivery	ARVADA, CO
7:58 am	At local FedEx facility	ARVADA, CO
5:11 am	At destination sort facility	DENVER, CO
4:16 am	Departed FedEx location	MEMPHIS, TN
12:23 am	Arrived at FedEx location	MEMPHIS, TN
6/05/2017 - Monday		
5:00 pm	Left FedEx origin facility	PASCO, WA
3:35 pm	Shipment information sent to FedEx	
3:26 pm	Picked up	PASCO, WA

Shipment Facts

Tracking number	779304404448	**Service**	FedEx Priority Overnight
Master tracking number	779304404518	**Weight**	84 lbs / 38.1 kgs
Delivered To	Shipping/Receiving	**Total pieces**	2
Total shipment weight	84 lbs / 38.1 kgs	**Terms**	Third Party
Shipper reference	CACN-304121	**Packaging**	Your Packaging
Special handling section	Deliver Weekday	**Standard transit**	6/06/2017 by 10:30 am

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Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Analyzed for but not detected.

GC/MS VOA TICs

Qualifier	Qualifier Description
J	Indicates an Estimated Value for TICs
N	Presumptive evidence of material.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS Semi VOA

Qualifier	Qualifier Description
U	Analyzed for but not detected.

GC/MS Semi VOA TICs

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
J	Indicates an Estimated Value for TICs
N	Presumptive evidence of material.

Metals

Qualifier	Qualifier Description
N	Recovery exceeds upper or lower control limits
U	Analyzed for but not detected.
B	Estimated result. Result is less than the RL, but greater than MDL
X	See case narrative notes for explanation of the 'X' flag

General Chemistry

Qualifier	Qualifier Description
X	See case narrative notes for explanation of the 'X' flag
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.
D	The reported value is from a dilution.
D	Sample results are obtained from a dilution; the surrogate or matrix spike recoveries reported are calculated from diluted samples.
U	Analyzed for but not detected.
N	MS, MSD: Spike recovery 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

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
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)
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: FRC16-03

TestAmerica Job ID: 280-97923-1
SDG: DN0147

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL DEN
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL DEN
6010C	Metals (ICP)	SW846	TAL DEN
6020A	Metals (ICP/MS)	SW846	TAL DEN
350.1	Nitrogen, Ammonia	MCAWW	TAL DEN
353.2	Nitrogen, Nitrate-Nitrite	MCAWW	TAL DEN
410.4	COD	MCAWW	TAL DEN
9020B	Organic Halides, Total (TOX)	SW846	TAL DEN
9040C	pH	SW846	TAL DEN
9050A	Specific Conductance	SW846	TAL DEN
SM 2320B	Alkalinity	SM	TAL DEN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL DEN
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL DEN

Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.
SM = "Standard Methods For The Examination Of Water And Wastewater",
SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Sample Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: FRC16-03

TestAmerica Job ID: 280-97923-1
SDG: DN0147

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
280-97923-1	B3B8B1	Water	06/05/17 06:30	06/06/17 09:30
280-97923-2	B3B8B0	Water	06/05/17 07:50	06/06/17 09:30
280-97923-3	B3B8B5	Water	06/05/17 07:50	06/06/17 09:30

Client: CH2M Hill Plateau Remediation Company
Project/Site: FRC16-03

TestAmerica Job ID: 280-97923-1
SDG: DN0147

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

Client Sample ID: B3B8B1 — **Lab Sample ID: 280-97923-1**
Date Collected: 06/05/17 06:30 — **Matrix: Water**
Date Received: 06/06/17 09:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	0.19	U	1.0	0.19	ug/L			06/11/17 18:10	1
Trichloroethene	0.16	U	1.0	0.16	ug/L			06/11/17 18:10	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*2.2*	*N*	*ug/L*		*5.30*			*06/11/17 18:10*	*1*
Chloroform	*4.6*	*N J*	*ug/L*		*5.72*	*67-66-3*		*06/11/17 18:10*	*1*
Cyclotrisiloxane, hexamethyl-	*3.1*	*N J*	*ug/L*		*9.55*	*541-05-9*		*06/11/17 18:10*	*1*
Cyclotetrasiloxane, octamethyl-	*4.8*	*N J*	*ug/L*		*13.05*	*556-67-2*		*06/11/17 18:10*	*1*
Unknown	*1.4*	*N*	*ug/L*		*15.02*			*06/11/17 18:10*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*87*		*70 - 130*		*06/11/17 18:10*	*1*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*		*06/11/17 18:10*	*1*
Dibromofluoromethane (Surr)	*97*		*70 - 130*		*06/11/17 18:10*	*1*
Toluene-d8 (Surr)	*94*		*70 - 130*		*06/11/17 18:10*	*1*

Client Sample ID: B3B8B0 — **Lab Sample ID: 280-97923-2**
Date Collected: 06/05/17 07:50 — **Matrix: Water**
Date Received: 06/06/17 09:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	0.19	U	1.0	0.19	ug/L			06/11/17 18:32	1
Trichloroethene	0.16	U	1.0	0.16	ug/L			06/11/17 18:32	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Chloromethane	*0.52*	*J*	*ug/L*		*2.31*	*74-87-3*		*06/11/17 18:32*	*1*
Unknown	*2.7*	*N*	*ug/L*		*5.29*			*06/11/17 18:32*	*1*
Cyclotrisiloxane, hexamethyl-	*3.6*	*N J*	*ug/L*		*9.54*	*541-05-9*		*06/11/17 18:32*	*1*
Cyclotetrasiloxane, octamethyl-	*5.4*	*N J*	*ug/L*		*13.04*	*556-67-2*		*06/11/17 18:32*	*1*
Unknown	*1.6*	*N*	*ug/L*		*15.03*			*06/11/17 18:32*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*93*		*70 - 130*		*06/11/17 18:32*	*1*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*		*06/11/17 18:32*	*1*
Dibromofluoromethane (Surr)	*108*		*70 - 130*		*06/11/17 18:32*	*1*
Toluene-d8 (Surr)	*106*		*70 - 130*		*06/11/17 18:32*	*1*

Client Sample ID: B3B8B5 — **Lab Sample ID: 280-97923-3**
Date Collected: 06/05/17 07:50 — **Matrix: Water**
Date Received: 06/06/17 09:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	0.19	U	1.0	0.19	ug/L			06/11/17 19:37	1
Trichloroethene	0.16	U	1.0	0.16	ug/L			06/11/17 19:37	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*3.0*	*N*	*ug/L*		*5.30*			*06/11/17 19:37*	*1*
Cyclotrisiloxane, hexamethyl-	*2.3*	*N J*	*ug/L*		*9.53*	*541-05-9*		*06/11/17 19:37*	*1*
Cyclotetrasiloxane, octamethyl-	*3.0*	*N J*	*ug/L*		*13.05*	*556-67-2*		*06/11/17 19:37*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*92*		*70 - 130*		*06/11/17 19:37*	*1*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*		*06/11/17 19:37*	*1*

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

Client Sample ID: B3B8B5 **Lab Sample ID: 280-97923-3**
Date Collected: 06/05/17 07:50 **Matrix: Water**
Date Received: 06/06/17 09:30

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	105		70 - 130		06/11/17 19:37	1
Toluene-d8 (Surr)	98		70 - 130		06/11/17 19:37	1

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

Client Sample ID: B3B8B0 **Lab Sample ID: 280-97923-2**
Date Collected: 06/05/17 07:50 **Matrix: Water**
Date Received: 06/06/17 09:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Diphenylhydrazine	0.23	U	10	0.23	ug/L		06/12/17 10:35	06/22/17 21:23	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	100	N	ug/L		2.01		06/12/17 10:35	06/22/17 21:23	1
Unknown	27	N	ug/L		3.23		06/12/17 10:35	06/22/17 21:23	1
Unknown	4.2	N	ug/L		4.13		06/12/17 10:35	06/22/17 21:23	1
Unknown	7.8	N	ug/L		4.44		06/12/17 10:35	06/22/17 21:23	1
Dimethyl phthalate	0.21	J	ug/L		7.34	131-11-3	06/12/17 10:35	06/22/17 21:23	1
Bis(2-ethylhexyl) phthalate	1.1	J	ug/L		13.40	117-81-7	06/12/17 10:35	06/22/17 21:23	1
Unknown	11	N	ug/L		15.38		06/12/17 10:35	06/22/17 21:23	1
Unknown	4.7	N	ug/L		15.96		06/12/17 10:35	06/22/17 21:23	1
Eicosane	5.4	N J	ug/L		17.00	112-95-8	06/12/17 10:35	06/22/17 21:23	1
Eicosane	5.0	N J	ug/L		18.09	112-95-8	06/12/17 10:35	06/22/17 21:23	1
Unknown	6.4	N	ug/L		19.20		06/12/17 10:35	06/22/17 21:23	1
Eicosane	4.7	N J	ug/L		20.30	112-95-8	06/12/17 10:35	06/22/17 21:23	1
Eicosane	4.3	N J	ug/L		21.40	112-95-8	06/12/17 10:35	06/22/17 21:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	71		48 - 130	06/12/17 10:35	06/22/17 21:23	1
2-Fluorophenol (Surr)	69		41 - 130	06/12/17 10:35	06/22/17 21:23	1
2,4,6-Tribromophenol (Surr)	85		42 - 130	06/12/17 10:35	06/22/17 21:23	1
Nitrobenzene-d5 (Surr)	69		42 - 130	06/12/17 10:35	06/22/17 21:23	1
Phenol-d5 (Surr)	75		45 - 130	06/12/17 10:35	06/22/17 21:23	1
Terphenyl-d14 (Surr)	44		20 - 130	06/12/17 10:35	06/22/17 21:23	1

Client Sample ID: B3B8B5 **Lab Sample ID: 280-97923-3**
Date Collected: 06/05/17 07:50 **Matrix: Water**
Date Received: 06/06/17 09:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Diphenylhydrazine	0.23	U	10	0.23	ug/L		06/12/17 10:35	06/22/17 22:48	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	94	N	ug/L		2.00		06/12/17 10:35	06/22/17 22:48	1
Unknown	24	N	ug/L		3.23		06/12/17 10:35	06/22/17 22:48	1
Unknown	4.8	N	ug/L		4.44		06/12/17 10:35	06/22/17 22:48	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	63		48 - 130	06/12/17 10:35	06/22/17 22:48	1
2-Fluorophenol (Surr)	57		41 - 130	06/12/17 10:35	06/22/17 22:48	1
2,4,6-Tribromophenol (Surr)	88		42 - 130	06/12/17 10:35	06/22/17 22:48	1
Nitrobenzene-d5 (Surr)	56		42 - 130	06/12/17 10:35	06/22/17 22:48	1

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

Client Sample ID: B3B8B5 — **Lab Sample ID: 280-97923-3**
Date Collected: 06/05/17 07:50 — **Matrix: Water**
Date Received: 06/06/17 09:30

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Phenol-d5 (Surr)	63		45 - 130	06/12/17 10:35	06/22/17 22:48	1
Terphenyl-d14 (Surr)	78		20 - 130	06/12/17 10:35	06/22/17 22:48	1

Method: 6010C - Metals (ICP)

Client Sample ID: B3B8B0 — **Lab Sample ID: 280-97923-2**
Date Collected: 06/05/17 07:50 — **Matrix: Water**
Date Received: 06/06/17 09:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	258000		200	34.5	ug/L		06/12/17 07:02	06/12/17 23:41	1
Potassium	18200	N	3000	237	ug/L		06/12/17 07:02	06/12/17 23:41	1
Sodium	169000	N	1000	117	ug/L		06/12/17 07:02	06/14/17 01:40	1
Silicon	19900		500	34.7	ug/L		06/12/17 07:02	06/14/17 01:40	1

Client Sample ID: B3B8B5 — **Lab Sample ID: 280-97923-3**
Date Collected: 06/05/17 07:50 — **Matrix: Water**
Date Received: 06/06/17 09:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	256000		200	34.5	ug/L		06/12/17 07:02	06/12/17 23:56	1
Potassium	18700	N	3000	237	ug/L		06/12/17 07:02	06/12/17 23:56	1
Sodium	178000	N	1000	117	ug/L		06/12/17 07:02	06/14/17 01:55	1
Silicon	20700		500	34.7	ug/L		06/12/17 07:02	06/14/17 01:55	1

Method: 6020A - Metals (ICP/MS)

Client Sample ID: B3B8B0 — **Lab Sample ID: 280-97923-2**
Date Collected: 06/05/17 07:50 — **Matrix: Water**
Date Received: 06/06/17 09:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	5.2		5.0	0.33	ug/L		06/20/17 13:45	06/21/17 06:49	1
Barium	66.2		1.0	0.29	ug/L		06/20/17 13:45	06/21/17 06:49	1
Beryllium	0.080	U	1.0	0.080	ug/L		06/20/17 13:45	06/21/17 06:49	1
Chromium	204		2.0	0.50	ug/L		06/20/17 13:45	06/21/17 06:49	1
Lead	0.18	U	1.0	0.18	ug/L		06/20/17 13:45	06/21/17 06:49	1
Selenium	1.7	B	5.0	0.70	ug/L		06/20/17 13:45	06/21/17 06:49	1
Thallium	0.052	B	1.0	0.050	ug/L		06/20/17 13:45	06/21/17 06:49	1
Tin	0.77	U	10.0	0.77	ug/L		06/20/17 13:45	06/21/17 06:49	1
Tungsten	0.32	B	5.0	0.20	ug/L		06/20/17 13:45	06/21/17 06:49	1
Uranium	542		1.0	0.050	ug/L		06/20/17 13:45	06/21/17 06:49	1
Vanadium	16.3		5.0	0.50	ug/L		06/20/17 13:45	06/21/17 06:49	1
Zinc	2.0	U	10.0	2.0	ug/L		06/20/17 13:45	06/21/17 06:49	1

Client Sample ID: B3B8B5 — **Lab Sample ID: 280-97923-3**
Date Collected: 06/05/17 07:50 — **Matrix: Water**
Date Received: 06/06/17 09:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	5.0		5.0	0.33	ug/L		06/20/17 13:45	06/21/17 07:08	1
Barium	65.2		1.0	0.29	ug/L		06/20/17 13:45	06/21/17 07:08	1
Beryllium	0.10	B	1.0	0.080	ug/L		06/20/17 13:45	06/21/17 07:08	1
Chromium	201		2.0	0.50	ug/L		06/20/17 13:45	06/21/17 07:08	1

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

Client Sample ID: B3B8B5 **Lab Sample ID: 280-97923-3**
Date Collected: 06/05/17 07:50 **Matrix: Water**
Date Received: 06/06/17 09:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.18	U	1.0	0.18	ug/L		06/20/17 13:45	06/21/17 07:08	1
Selenium	**1.9**	**B**	5.0	0.70	ug/L		06/20/17 13:45	06/21/17 07:08	1
Thallium	**0.072**	**B**	1.0	0.050	ug/L		06/20/17 13:45	06/21/17 07:08	1
Tin	0.77	U	10.0	0.77	ug/L		06/20/17 13:45	06/21/17 07:08	1
Tungsten	**0.39**	**B**	5.0	0.20	ug/L		06/20/17 13:45	06/21/17 07:08	1
Uranium	**526**		1.0	0.050	ug/L		06/20/17 13:45	06/21/17 07:08	1
Vanadium	**15.0**		5.0	0.50	ug/L		06/20/17 13:45	06/21/17 07:08	1
Zinc	2.0	U	10.0	2.0	ug/L		06/20/17 13:45	06/21/17 07:08	1

General Chemistry

Client Sample ID: B3B8B0 **Lab Sample ID: 280-97923-2**
Date Collected: 06/05/17 07:50 **Matrix: Water**
Date Received: 06/06/17 09:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia as N	22.0	U	100	22.0	ug/L			06/28/17 17:45	1
Nitrate Nitrite as N	**36300**	**D**	500	95.0	ug/L			06/23/17 15:42	5
Chemical Oxygen Demand	**41500**	**D C**	40000	8120	ug/L			06/22/17 15:18	2
Total Organic Halogens - Dup	**49.6**	**B N D**	60.0	15.4	ug/L			06/28/17 10:32	1
pH	**8.11**		0.100	0.100	SU			06/27/17 13:52	1
Specific Conductance	**1680**		2.00	2.00	umhos/cm			06/23/17 23:00	1
Alkalinity as CaCO3	**252000**		5000	1070	ug/L			06/09/17 19:34	1
Total Dissolved Solids	**1520000**		10000	4700	ug/L			06/09/17 08:23	1
Total Suspended Solids	**1600**	**B**	4000	1100	ug/L			06/08/17 19:49	1

Client Sample ID: B3B8B5 **Lab Sample ID: 280-97923-3**
Date Collected: 06/05/17 07:50 **Matrix: Water**
Date Received: 06/06/17 09:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia as N	22.0	U	100	22.0	ug/L			06/28/17 17:51	1
Nitrate Nitrite as N	**37000**	**D**	500	95.0	ug/L			06/23/17 17:56	5
Chemical Oxygen Demand	**45000**	**D C**	40000	8120	ug/L			06/22/17 15:18	2
Total Organic Halogens - Dup	**56.4**		30.0	7.7	ug/L			06/21/17 11:07	1
pH	**8.12**		0.100	0.100	SU			06/27/17 14:02	1
Specific Conductance	**1640**		2.00	2.00	umhos/cm			06/23/17 23:00	1
Alkalinity as CaCO3	**270000**		5000	1070	ug/L			06/09/17 19:46	1
Total Dissolved Solids	**1510000**		10000	4700	ug/L			06/09/17 08:23	1
Total Suspended Solids	1100	U	4000	1100	ug/L			06/08/17 19:49	1

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

Lab Sample ID: MB 280-376825/6 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 376825

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	0.19	U	1.0	0.19	ug/L			06/11/17 11:17	1
Trichloroethene	0.16	U	1.0	0.16	ug/L			06/11/17 11:17	1

Tentatively Identified Compound	*MB Est. Result*	*MB Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Methylene Chloride	*1.63*	*J*	*ug/L*		*3.95*	*75-09-2*		*06/11/17 11:17*	*1*
Unknown	*2.26*	*N*	*ug/L*		*5.27*			*06/11/17 11:17*	*1*
Cyclotrisiloxane, hexamethyl-	*6.78*	*N J*	*ug/L*		*9.54*	*541-05-9*		*06/11/17 11:17*	*1*
Cyclotetrasiloxane, octamethyl-	*119*	*N J*	*ug/L*		*13.04*	*556-67-2*		*06/11/17 11:17*	*1*
Unknown	*55.5*	*N*	*ug/L*		*15.01*			*06/11/17 11:17*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*93*		*70 - 130*		*06/11/17 11:17*	*1*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*		*06/11/17 11:17*	*1*
Dibromofluoromethane (Surr)	*104*		*70 - 130*		*06/11/17 11:17*	*1*
Toluene-d8 (Surr)	*99*		*70 - 130*		*06/11/17 11:17*	*1*

Lab Sample ID: LCS 280-376825/4 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 376825

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon tetrachloride	5.00	4.42		ug/L		88	65 - 135
Trichloroethene	5.00	4.51		ug/L		90	65 - 135

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*94*		*70 - 130*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*
Dibromofluoromethane (Surr)	*103*		*70 - 130*
Toluene-d8 (Surr)	*105*		*70 - 130*

Lab Sample ID: 280-97923-2 MS — **Client Sample ID: B3B8B0**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 376825

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon tetrachloride	0.19	U	5.00	4.16		ug/L		83	65 - 135
Trichloroethene	0.16	U	5.00	4.26		ug/L		85	65 - 135

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*91*		*70 - 130*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*
Dibromofluoromethane (Surr)	*100*		*70 - 130*
Toluene-d8 (Surr)	*102*		*70 - 130*

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

Lab Sample ID: 280-97923-2 MSD — **Client Sample ID: B3B8B0**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 376825

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Carbon tetrachloride	0.19	U	5.00	4.23		ug/L		85	65 - 135	2	21
Trichloroethene	0.16	U	5.00	4.34		ug/L		87	65 - 135	2	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*94*		*70 - 130*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*
Dibromofluoromethane (Surr)	*103*		*70 - 130*
Toluene-d8 (Surr)	*107*		*70 - 130*

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

Lab Sample ID: MB 280-376891/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 378407 — **Prep Batch: 376891**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Diphenylhydrazine	0.23	U	10	0.23	ug/L		06/12/17 10:35	06/22/17 18:32	1

Tentatively Identified Compound	*MB Est. Result*	*MB Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*				*06/12/17 10:35*	*06/22/17 18:32*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*76*		*48 - 130*	*06/12/17 10:35*	*06/22/17 18:32*	*1*
2-Fluorophenol (Surr)	*80*		*41 - 130*	*06/12/17 10:35*	*06/22/17 18:32*	*1*
2,4,6-Tribromophenol (Surr)	*79*		*42 - 130*	*06/12/17 10:35*	*06/22/17 18:32*	*1*
Nitrobenzene-d5 (Surr)	*81*		*42 - 130*	*06/12/17 10:35*	*06/22/17 18:32*	*1*
Phenol-d5 (Surr)	*85*		*45 - 130*	*06/12/17 10:35*	*06/22/17 18:32*	*1*
Terphenyl-d14 (Surr)	*92*		*20 - 130*	*06/12/17 10:35*	*06/22/17 18:32*	*1*

Lab Sample ID: LCS 280-376891/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 378407 — **Prep Batch: 376891**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,2-Diphenylhydrazine			80.9	64.2		ug/L		79	55 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*80*		*48 - 130*
2-Fluorophenol (Surr)	*81*		*41 - 130*
2,4,6-Tribromophenol (Surr)	*87*		*42 - 130*
Nitrobenzene-d5 (Surr)	*81*		*42 - 130*
Phenol-d5 (Surr)	*83*		*45 - 130*
Terphenyl-d14 (Surr)	*86*		*20 - 130*

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

Lab Sample ID: 280-97923-2 MS — **Client Sample ID: B3B8B0**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 378407 — **Prep Batch: 376891**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Diphenylhydrazine	0.23	U	80.1	63.1		ug/L		79	55 - 120

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*72*		*48 - 130*
2-Fluorophenol (Surr)	*65*		*41 - 130*
2,4,6-Tribromophenol (Surr)	*91*		*42 - 130*
Nitrobenzene-d5 (Surr)	*66*		*42 - 130*
Phenol-d5 (Surr)	*70*		*45 - 130*
Terphenyl-d14 (Surr)	*82*		*20 - 130*

Lab Sample ID: 280-97923-2 MSD — **Client Sample ID: B3B8B0**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 378407 — **Prep Batch: 376891**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2-Diphenylhydrazine	0.23	U	83.0	63.0		ug/L		76	55 - 120	0	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*69*		*48 - 130*
2-Fluorophenol (Surr)	*63*		*41 - 130*
2,4,6-Tribromophenol (Surr)	*87*		*42 - 130*
Nitrobenzene-d5 (Surr)	*66*		*42 - 130*
Phenol-d5 (Surr)	*65*		*45 - 130*
Terphenyl-d14 (Surr)	*72*		*20 - 130*

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 280-376763/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 377047 — **Prep Batch: 376763**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	34.5	U	200	34.5	ug/L		06/12/17 07:02	06/12/17 23:35	1
Potassium	237	U	3000	237	ug/L		06/12/17 07:02	06/12/17 23:35	1

Lab Sample ID: MB 280-376763/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 377237 — **Prep Batch: 376763**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	117	U	1000	117	ug/L		06/12/17 07:02	06/14/17 01:34	1
Silicon	34.7	U	500	34.7	ug/L		06/12/17 07:02	06/14/17 01:34	1

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

Lab Sample ID: LCS 280-376763/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 377047 — **Prep Batch: 376763**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Calcium	50000	56350		ug/L		113	80 - 120
Potassium	50000	57960		ug/L		116	80 - 120

Lab Sample ID: LCS 280-376763/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 377237 — **Prep Batch: 376763**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sodium	50000	54110		ug/L		108	80 - 120
Silicon	10000	10300		ug/L		103	80 - 120

Lab Sample ID: 280-97923-2 MS — **Client Sample ID: B3B8B0**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 377047 — **Prep Batch: 376763**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Calcium	258000		50000	318100	X	ug/L		120	75 - 125
Potassium	18200	N	50000	79870		ug/L		123	75 - 125

Lab Sample ID: 280-97923-2 MS — **Client Sample ID: B3B8B0**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 377237 — **Prep Batch: 376763**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sodium	169000	N	50000	225000		ug/L		112	75 - 125
Silicon	19900		10000	30260		ug/L		103	75 - 125

Lab Sample ID: 280-97923-2 MSD — **Client Sample ID: B3B8B0**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 377047 — **Prep Batch: 376763**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Calcium	258000		50000	338700	X	ug/L		161	75 - 125	6	20
Potassium	18200	N	50000	83040	N	ug/L		130	75 - 125	4	20

Lab Sample ID: 280-97923-2 MSD — **Client Sample ID: B3B8B0**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 377237 — **Prep Batch: 376763**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sodium	169000	N	50000	239900	N	ug/L		141	75 - 125	6	20
Silicon	19900		10000	31870		ug/L		119	75 - 125	5	20

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 280-376764/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 378195 — **Prep Batch: 376764**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.33	U	5.0	0.33	ug/L		06/20/17 13:45	06/21/17 06:42	1
Barium	0.29	U	1.0	0.29	ug/L		06/20/17 13:45	06/21/17 06:42	1
Beryllium	0.080	U	1.0	0.080	ug/L		06/20/17 13:45	06/21/17 06:42	1
Chromium	0.50	U	2.0	0.50	ug/L		06/20/17 13:45	06/21/17 06:42	1
Lead	0.18	U	1.0	0.18	ug/L		06/20/17 13:45	06/21/17 06:42	1
Selenium	0.70	U	5.0	0.70	ug/L		06/20/17 13:45	06/21/17 06:42	1
Thallium	0.050	U	1.0	0.050	ug/L		06/20/17 13:45	06/21/17 06:42	1
Tin	0.77	U	10.0	0.77	ug/L		06/20/17 13:45	06/21/17 06:42	1
Tungsten	0.20	U	5.0	0.20	ug/L		06/20/17 13:45	06/21/17 06:42	1
Uranium	0.050	U	1.0	0.050	ug/L		06/20/17 13:45	06/21/17 06:42	1
Vanadium	0.50	U	5.0	0.50	ug/L		06/20/17 13:45	06/21/17 06:42	1
Zinc	2.0	U	10.0	2.0	ug/L		06/20/17 13:45	06/21/17 06:42	1

Lab Sample ID: LCS 280-376764/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 378195 — **Prep Batch: 376764**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	40.0	38.10		ug/L		95	80 - 120
Barium	40.0	42.63		ug/L		107	80 - 120
Beryllium	40.0	40.86		ug/L		102	80 - 120
Chromium	40.0	40.72		ug/L		102	80 - 120
Lead	40.0	41.10		ug/L		103	80 - 120
Selenium	40.0	39.56		ug/L		99	80 - 120
Thallium	40.0	40.32		ug/L		101	80 - 120
Tin	40.0	38.73		ug/L		97	80 - 120
Tungsten	40.0	37.18		ug/L		93	80 - 120
Uranium	40.0	40.53		ug/L		101	80 - 120
Vanadium	40.0	42.46		ug/L		106	80 - 120
Zinc	40.0	40.30		ug/L		101	80 - 120

Lab Sample ID: 280-97923-2 MS — **Client Sample ID: B3B8B0**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 378195 — **Prep Batch: 376764**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	5.2		40.0	43.71		ug/L		96	75 - 125
Barium	66.2		40.0	106.5		ug/L		101	75 - 125
Beryllium	0.080	U	40.0	40.17		ug/L		100	75 - 125
Chromium	204		40.0	249.7	X	ug/L		113	75 - 125
Lead	0.18	U	40.0	39.21		ug/L		98	75 - 125
Selenium	1.7	B	40.0	42.01		ug/L		101	75 - 125
Thallium	0.052	B	40.0	38.90		ug/L		97	75 - 125
Tin	0.77	U	40.0	38.71		ug/L		97	75 - 125
Tungsten	0.32	B	40.0	38.04		ug/L		94	75 - 125
Uranium	542		40.0	573.2	X	ug/L		78	75 - 125
Vanadium	16.3		40.0	59.06		ug/L		107	75 - 125
Zinc	2.0	U	40.0	39.14		ug/L		98	75 - 125

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

Lab Sample ID: 280-97923-2 MSD — **Client Sample ID: B3B8B0**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 378195 — **Prep Batch: 376764**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	5.2		40.0	42.66		ug/L		94	75 - 125	2	20
Barium	66.2		40.0	106.8		ug/L		102	75 - 125	0	20
Beryllium	0.080	U	40.0	39.39		ug/L		98	75 - 125	2	20
Chromium	204		40.0	246.2	X	ug/L		105	75 - 125	1	20
Lead	0.18	U	40.0	38.74		ug/L		97	75 - 125	1	20
Selenium	1.7	B	40.0	42.51		ug/L		102	75 - 125	1	20
Thallium	0.052	B	40.0	38.81		ug/L		97	75 - 125	0	20
Tin	0.77	U	40.0	39.15		ug/L		98	75 - 125	1	20
Tungsten	0.32	B	40.0	37.93		ug/L		94	75 - 125	0	30
Uranium	542		40.0	584.1	X	ug/L		105	75 - 125	2	20
Vanadium	16.3		40.0	58.63		ug/L		106	75 - 125	1	20
Zinc	2.0	U	40.0	39.31		ug/L		98	75 - 125	0	20

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 280-379210/20 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 379210

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia as N	22.0	U	100	22.0	ug/L			06/28/17 17:43	1

Lab Sample ID: LCS 280-379210/18 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 379210

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia as N	2500	2504		ug/L		100	80 - 120

Lab Sample ID: LCSD 280-379210/19 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 379210

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ammonia as N	2500	2530		ug/L		101	80 - 120	1	20

Lab Sample ID: 280-97923-2 MS — **Client Sample ID: B3B8B0**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 379210

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia as N	22.0	U	1000	1059		ug/L		106	75 - 125

Lab Sample ID: 280-97923-2 MSD — **Client Sample ID: B3B8B0**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 379210

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ammonia as N	22.0	U	1000	1052		ug/L		105	75 - 125	1	20

Method: 353.2 - Nitrogen, Nitrate-Nitrite

Lab Sample ID: MB 280-378579/22 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 378579

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate Nitrite as N	19.0	U	100	19.0	ug/L			06/23/17 15:40	1

Lab Sample ID: MB 280-378579/66 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 378579

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate Nitrite as N	19.0	U	100	19.0	ug/L			06/23/17 17:08	1

Lab Sample ID: LCS 280-378579/21 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 378579

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate Nitrite as N	5000	5247		ug/L		105	80 - 120

Lab Sample ID: LCS 280-378579/65 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 378579

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate Nitrite as N	5000	5188		ug/L		104	80 - 120

Lab Sample ID: 280-97923-2 MS — **Client Sample ID: B3B8B0**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 378579

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate Nitrite as N	36300	D	20000	55960	D X	ug/L		98	75 - 125

Lab Sample ID: 280-97923-2 MSD — **Client Sample ID: B3B8B0**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 378579

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate Nitrite as N	36300	D	20000	55680	D X	ug/L		97	75 - 125	0	20

Method: 410.4 - COD

Lab Sample ID: MB 280-378355/36 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 378355

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	6808	B	20000	4060	ug/L			06/22/17 15:18	1

Method: 410.4 - COD (Continued)

Lab Sample ID: LCS 280-378355/34 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 378355

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chemical Oxygen Demand	100000	102600		ug/L		103	80 - 120

Lab Sample ID: LCSD 280-378355/35 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 378355

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chemical Oxygen Demand	100000	105400		ug/L		105	80 - 120	3	20

Lab Sample ID: 280-97923-2 MS — **Client Sample ID: B3B8B0**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 378355

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chemical Oxygen Demand	41500	D C	100000	128600	D C	ug/L		87	75 - 125

Lab Sample ID: 280-97923-2 MSD — **Client Sample ID: B3B8B0**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 378355

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chemical Oxygen Demand	41500	D C	100000	130700	D C	ug/L		89	75 - 125	2	20

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

Lab Sample ID: MB 280-378394/2 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 378394

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Halogens - Dup	7.7	U	30.0	7.7	ug/L			06/21/17 11:07	1

Lab Sample ID: LCS 280-378394/4 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 378394

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Halogens - Dup	100	97.66		ug/L		98	80 - 120

Lab Sample ID: 280-97843-A-1 MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 378394

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Halogens - Dup	416		100	354.0	X	ug/L		-62	75 - 125

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

Lab Sample ID: 280-97843-A-1 MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 378394

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Organic Halogens - Dup	416		100	359.4	X	ug/L		-57	75 - 125	2	23

Lab Sample ID: MB 280-379308/2 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 379308

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Halogens - Dup	7.7	U	30.0	7.7	ug/L			06/28/17 10:32	1

Lab Sample ID: LCS 280-379308/4 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 379308

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Halogens - Dup	100	94.00		ug/L		94	80 - 120

Lab Sample ID: 280-97923-2 MS — **Client Sample ID: B3B8B0**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 379308

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Halogens - Dup	49.6	B N D	200	275.5	D	ug/L		113	75 - 125

Lab Sample ID: 280-97923-2 MSD — **Client Sample ID: B3B8B0**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 379308

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Organic Halogens - Dup	49.6	B N D	200	308.7	N D	ug/L		130	75 - 125	11	23

Method: 9040C - pH

Lab Sample ID: LCS 280-379105/4 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 379105

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
pH	7.00	7.010		SU		100	99 - 101

Lab Sample ID: 280-97923-2 DU — **Client Sample ID: B3B8B0**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 379105

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
pH	8.11		8.120		SU		0.1	5

QC Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: FRC16-03

TestAmerica Job ID: 280-97923-1
SDG: DN0147

Method: 9050A - Specific Conductance

Lab Sample ID: MB 280-378587/5 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 378587

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	2.00	U	2.00	2.00	umhos/cm			06/23/17 23:00	1

Lab Sample ID: LCS 280-378587/3 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 378587

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Specific Conductance	1410	1379		umhos/cm		98	90 - 110

Lab Sample ID: LCSD 280-378587/4 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 378587

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Specific Conductance	1410	1384		umhos/cm		98	90 - 110	0	10

Lab Sample ID: 280-97923-2 DU — **Client Sample ID: B3B8B0**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 378587

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Specific Conductance	1680		1689		umhos/cm		0.4	10

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 280-376805/31 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 376805

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	2910	B	5000	1070	ug/L			06/09/17 19:28	1

Lab Sample ID: LCS 280-376805/30 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 376805

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity as CaCO3	200000	196400		ug/L		98	80 - 120

Lab Sample ID: 280-97923-2 DU — **Client Sample ID: B3B8B0**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 376805

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Alkalinity as CaCO3	252000		254000		ug/L		0.7	20

QC Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: FRC16-03

TestAmerica Job ID: 280-97923-1
SDG: DN0147

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 280-376675/1 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 376675

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	4700	U	10000	4700	ug/L			06/09/17 08:23	1

Lab Sample ID: LCS 280-376675/2 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 376675

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	500000	494000		ug/L		99	80 - 120

Lab Sample ID: 280-97923-2 DU — **Client Sample ID: B3B8B0**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 376675

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	1520000		1544000		ug/L		2	20

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 280-376642/2 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 376642

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	1100	U	4000	1100	ug/L			06/08/17 19:49	1

Lab Sample ID: LCS 280-376642/1 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 376642

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Suspended Solids	100000	94400		ug/L		94	80 - 120

Lab Sample ID: 280-97923-2 DU — **Client Sample ID: B3B8B0**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 376642

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Suspended Solids	1600	B	1600	B	ug/L		0	20

QC Association Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: FRC16-03

TestAmerica Job ID: 280-97923-1
SDG: DN0147

GC/MS VOA

Analysis Batch: 376825

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-97923-1	B3B8B1	Total/NA	Water	8260B	
280-97923-2	B3B8B0	Total/NA	Water	8260B	
280-97923-3	B3B8B5	Total/NA	Water	8260B	
MB 280-376825/6	Method Blank	Total/NA	Water	8260B	
LCS 280-376825/4	Lab Control Sample	Total/NA	Water	8260B	
280-97923-2 MS	B3B8B0	Total/NA	Water	8260B	
280-97923-2 MSD	B3B8B0	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 376891

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-97923-2	B3B8B0	Total/NA	Water	3520C	
280-97923-3	B3B8B5	Total/NA	Water	3520C	
MB 280-376891/1-A	Method Blank	Total/NA	Water	3520C	
LCS 280-376891/2-A	Lab Control Sample	Total/NA	Water	3520C	
280-97923-2 MS	B3B8B0	Total/NA	Water	3520C	
280-97923-2 MSD	B3B8B0	Total/NA	Water	3520C	

Analysis Batch: 378407

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-97923-2	B3B8B0	Total/NA	Water	8270D	376891
280-97923-3	B3B8B5	Total/NA	Water	8270D	376891
MB 280-376891/1-A	Method Blank	Total/NA	Water	8270D	376891
LCS 280-376891/2-A	Lab Control Sample	Total/NA	Water	8270D	376891
280-97923-2 MS	B3B8B0	Total/NA	Water	8270D	376891
280-97923-2 MSD	B3B8B0	Total/NA	Water	8270D	376891

Metals

Prep Batch: 376763

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-97923-2	B3B8B0	Total/NA	Water	3010A	
280-97923-3	B3B8B5	Total/NA	Water	3010A	
MB 280-376763/1-A	Method Blank	Total/NA	Water	3010A	
LCS 280-376763/2-A	Lab Control Sample	Total/NA	Water	3010A	
280-97923-2 MS	B3B8B0	Total/NA	Water	3010A	
280-97923-2 MSD	B3B8B0	Total/NA	Water	3010A	

Prep Batch: 376764

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-97923-2	B3B8B0	Total/NA	Water	3020A	
280-97923-3	B3B8B5	Total/NA	Water	3020A	
MB 280-376764/1-A	Method Blank	Total/NA	Water	3020A	
LCS 280-376764/2-A	Lab Control Sample	Total/NA	Water	3020A	
280-97923-2 MS	B3B8B0	Total/NA	Water	3020A	
280-97923-2 MSD	B3B8B0	Total/NA	Water	3020A	

Metals (Continued)

Analysis Batch: 377047

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-97923-2	B3B8B0	Total/NA	Water	6010C	376763
280-97923-3	B3B8B5	Total/NA	Water	6010C	376763
MB 280-376763/1-A	Method Blank	Total/NA	Water	6010C	376763
LCS 280-376763/2-A	Lab Control Sample	Total/NA	Water	6010C	376763
280-97923-2 MS	B3B8B0	Total/NA	Water	6010C	376763
280-97923-2 MSD	B3B8B0	Total/NA	Water	6010C	376763

Analysis Batch: 377237

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-97923-2	B3B8B0	Total/NA	Water	6010C	376763
280-97923-3	B3B8B5	Total/NA	Water	6010C	376763
MB 280-376763/1-A	Method Blank	Total/NA	Water	6010C	376763
LCS 280-376763/2-A	Lab Control Sample	Total/NA	Water	6010C	376763
280-97923-2 MS	B3B8B0	Total/NA	Water	6010C	376763
280-97923-2 MSD	B3B8B0	Total/NA	Water	6010C	376763

Analysis Batch: 378195

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-97923-2	B3B8B0	Total/NA	Water	6020A	376764
280-97923-3	B3B8B5	Total/NA	Water	6020A	376764
MB 280-376764/1-A	Method Blank	Total/NA	Water	6020A	376764
LCS 280-376764/2-A	Lab Control Sample	Total/NA	Water	6020A	376764
280-97923-2 MS	B3B8B0	Total/NA	Water	6020A	376764
280-97923-2 MSD	B3B8B0	Total/NA	Water	6020A	376764

General Chemistry

Analysis Batch: 376642

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-97923-2	B3B8B0	Total/NA	Water	SM 2540D	
280-97923-3	B3B8B5	Total/NA	Water	SM 2540D	
MB 280-376642/2	Method Blank	Total/NA	Water	SM 2540D	
LCS 280-376642/1	Lab Control Sample	Total/NA	Water	SM 2540D	
280-97923-2 DU	B3B8B0	Total/NA	Water	SM 2540D	

Analysis Batch: 376675

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-97923-2	B3B8B0	Total/NA	Water	SM 2540C	
280-97923-3	B3B8B5	Total/NA	Water	SM 2540C	
MB 280-376675/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 280-376675/2	Lab Control Sample	Total/NA	Water	SM 2540C	
280-97923-2 DU	B3B8B0	Total/NA	Water	SM 2540C	

Analysis Batch: 376805

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-97923-2	B3B8B0	Total/NA	Water	SM 2320B	
280-97923-3	B3B8B5	Total/NA	Water	SM 2320B	
MB 280-376805/31	Method Blank	Total/NA	Water	SM 2320B	
LCS 280-376805/30	Lab Control Sample	Total/NA	Water	SM 2320B	
280-97923-2 DU	B3B8B0	Total/NA	Water	SM 2320B	

QC Association Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: FRC16-03

TestAmerica Job ID: 280-97923-1
SDG: DN0147

General Chemistry (Continued)

Analysis Batch: 378355

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-97923-2	B3B8B0	Total/NA	Water	410.4	
280-97923-3	B3B8B5	Total/NA	Water	410.4	
MB 280-378355/36	Method Blank	Total/NA	Water	410.4	
LCS 280-378355/34	Lab Control Sample	Total/NA	Water	410.4	
LCSD 280-378355/35	Lab Control Sample Dup	Total/NA	Water	410.4	
280-97923-2 MS	B3B8B0	Total/NA	Water	410.4	
280-97923-2 MSD	B3B8B0	Total/NA	Water	410.4	

Analysis Batch: 378394

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-97923-3	B3B8B5	Total/NA	Water	9020B	
MB 280-378394/2	Method Blank	Total/NA	Water	9020B	
LCS 280-378394/4	Lab Control Sample	Total/NA	Water	9020B	
280-97843-A-1 MS	Matrix Spike	Total/NA	Water	9020B	
280-97843-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	9020B	

Analysis Batch: 378579

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-97923-2	B3B8B0	Total/NA	Water	353.2	
280-97923-3	B3B8B5	Total/NA	Water	353.2	
MB 280-378579/22	Method Blank	Total/NA	Water	353.2	
MB 280-378579/66	Method Blank	Total/NA	Water	353.2	
LCS 280-378579/21	Lab Control Sample	Total/NA	Water	353.2	
LCS 280-378579/65	Lab Control Sample	Total/NA	Water	353.2	
280-97923-2 MS	B3B8B0	Total/NA	Water	353.2	
280-97923-2 MSD	B3B8B0	Total/NA	Water	353.2	

Analysis Batch: 378587

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-97923-2	B3B8B0	Total/NA	Water	9050A	
280-97923-3	B3B8B5	Total/NA	Water	9050A	
MB 280-378587/5	Method Blank	Total/NA	Water	9050A	
LCS 280-378587/3	Lab Control Sample	Total/NA	Water	9050A	
LCSD 280-378587/4	Lab Control Sample Dup	Total/NA	Water	9050A	
280-97923-2 DU	B3B8B0	Total/NA	Water	9050A	

Analysis Batch: 379105

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-97923-2	B3B8B0	Total/NA	Water	9040C	
280-97923-3	B3B8B5	Total/NA	Water	9040C	
LCS 280-379105/4	Lab Control Sample	Total/NA	Water	9040C	
280-97923-2 DU	B3B8B0	Total/NA	Water	9040C	

Analysis Batch: 379210

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-97923-2	B3B8B0	Total/NA	Water	350.1	
280-97923-3	B3B8B5	Total/NA	Water	350.1	
MB 280-379210/20	Method Blank	Total/NA	Water	350.1	
LCS 280-379210/18	Lab Control Sample	Total/NA	Water	350.1	
LCSD 280-379210/19	Lab Control Sample Dup	Total/NA	Water	350.1	
280-97923-2 MS	B3B8B0	Total/NA	Water	350.1	

QC Association Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: FRC16-03

TestAmerica Job ID: 280-97923-1
SDG: DN0147

General Chemistry (Continued)

Analysis Batch: 379210 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-97923-2 MSD	B3B8B0	Total/NA	Water	350.1	

Analysis Batch: 379308

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-97923-2	B3B8B0	Total/NA	Water	9020B	
MB 280-379308/2	Method Blank	Total/NA	Water	9020B	
LCS 280-379308/4	Lab Control Sample	Total/NA	Water	9020B	
280-97923-2 MS	B3B8B0	Total/NA	Water	9020B	
280-97923-2 MSD	B3B8B0	Total/NA	Water	9020B	

Surrogate Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: FRC16-03

TestAmerica Job ID: 280-97923-1
SDG: DN0147

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

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

		Percent Surrogate Recovery (Acceptance Limits)			
		12DCE	BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	(70-130)	(70-130)
280-97923-1	B3B8B1	87	100	97	94
280-97923-2	B3B8B0	93	109	108	106
280-97923-2 MS	B3B8B0	91	97	100	102
280-97923-2 MSD	B3B8B0	94	100	103	107
280-97923-3	B3B8B5	92	105	105	98
LCS 280-376825/4	Lab Control Sample	94	97	103	105
MB 280-376825/6	Method Blank	93	104	104	99

Surrogate Legend

12DCE = 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)					
		FBP	2FP	TBP	NBZ	PHL	TPH
Lab Sample ID	Client Sample ID	(48-130)	(41-130)	(42-130)	(42-130)	(45-130)	(20-130)
280-97923-2	B3B8B0	71	69	85	69	75	44
280-97923-2 MS	B3B8B0	72	65	91	66	70	82
280-97923-2 MSD	B3B8B0	69	63	87	66	65	72
280-97923-3	B3B8B5	63	57	88	56	63	78
LCS 280-376891/2-A	Lab Control Sample	80	81	87	81	83	86
MB 280-376891/1-A	Method Blank	76	80	79	81	85	92

Surrogate Legend

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