CLEARWATER ENVIRONMENTAL RESOURCES, LLC

SEMI-ANNUAL
PROGRESS REPORT NO. 7
VOLUNTARY REMEDIATION PROGRAM

RAYLOC FACILITY
600 RAYLOC DRIVE
FULTON COUNTY
ATLANTA, GEORGIA
HSI SITE # 10547

CLEARWATER PROJECT NO. 1502-1-3

Prepared For:

Genuine Parts Company
2999 Circle 75 Parkway
Atlanta, Georgia 30339

Prepared By:

Clearwater Environmental Resources, LLC
3870 Peachtree Industrial Boulevard
Suite 340139
Duluth, Georgia 30096

APRIL 7, 2017

CLEARWATER ENVIRONMENTAL RESOURCES, LLC

April 7, 2017

Mr. Allan C. Nix, P.G.
Georgia Department of Natural Resources
Georgia EPD Response and Remediation Program (GAEPD)
2 Martin Luther King Jr. Dr., SE, STE 1462 East
Atlanta, GA 30334

Subject: **Semi-Annual Progress Report No. 7**
Voluntary Remediation Program
Rayloc Facility
600 Rayloc Drive, SW
Atlanta, Fulton County, Georgia 30336
HSI #10547
Clearwater Project No. 1502-1-3

Dear Mr. Nix:

Clearwater Environmental Resources, LLC (Clearwater), under contract to Genuine Parts Company (GPC), respectfully submits this 7th Semi-Annual Progress Report for the Rayloc facility. This report describes the actions taken at the site since the 6th Semi-Annual VRP Progress Report was submitted on October 5, 2016.

Clearwater appreciates the opportunity to provide this Progress Report. Please feel free to contact me at (678) 491-4601 or jack.wintle@clearwaterenv.net or Mr. Bob Lewis with Genuine Parts Company at (404) 858-2564 if you have any questions regarding our report.

Sincerely,
Clearwater Environmental Resources, LLC

Jack A. Wintle, P.G.
Senior Environmental Geologist

cc: Mr. Bob Lewis, Genuine Parts Company
Mr. Douglas E. Cloud, Kazmarek Mowrey Cloud Laseter LLP

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1.0 INTRODUCTI ON

A Voluntary Remediation Plan for the Rayloc facility located at 600 Rayloc Drive in Atlanta, Fulton County, Georgia, was received by the Georgia Environmental Protection Division Response and Remediation Program (GAEPD) on January 15, 2013 and conditionally approved by the GAEPD on October 11, 2013. In order to evaluate the progress of the voluntary clean-up efforts, semi-annual progress reports are required. Please refer to Figure 1 for a Site Aerial Map for the location of the site.

The remedial activities include the continued treatment of contaminated groundwater in and downgradient of the former waste pit area using gas-infusion technology with the objective of achieving Type 3 Risk Reduction Standards (RRS). Clearwater has also operated an Air Sparge/Soil Vapor Extraction system using the gas-infusion technology and gravity fed In-Situ Chemical Oxidation (ISCO) to the only area of soil impact identified within the former Rayloc building to effect the same result. Further, Clearwater completed excavation of impacted soils identified outside of the Rayloc building during the PPCAP investigation.

1.1 Groundwater Sampling Protocol

Groundwater sampling activities at the Rayloc Facility are completed in a manner consistent with the current EPA Region 4 SESD Operating Procedure SESDPROC-301-R3, dated March 4, 2013. Unless otherwise noted, each monitoring well is sampled via bailers or the "Low Flow" method using a bladder pump. These methodologies were selected based on the target depth of the samples and the objective of minimizing investigation-derived waste (IDW). Sampling commences when parameters in the purged groundwater reach a pH variance of no more than 0.1 SU, a specific conductance variance of no more than 5% of the observed value, and a turbidity variance of less than 5 NTU or a total reading of less than 10 NTU, when possible. Sampling commences after the removal of three measured well volumes if stabilization has not been noted in the purging parameters.

Purging of each shallow monitoring well (less than 33 feet) is completed in a controlled, quiescent manner with single-use, disposable polyethylene bailers. Stabilization criteria of the purged groundwater are evaluated with an YSI 556 multi-parameter instrument and a nephelometric turbidimeter. The YSI 556 and turbidimeter are calibrated by a third-party equipment supplier and verified on-site per Operating Procedures SESDPROC-100, SESDPROC-101, and SESDPROC-103.

Sampling of the deeper (greater than 33 feet) monitoring wells is completed via a bladder pump constructed with stainless steel housing and Teflon bladders in conjunction with a QED MicroPurge controller. The bladder pump intake is placed at the target screen interval of the monitoring well, and the samples are collected through single-use, down-well polyethylene tubing and bladder. At the start and end of the sampling event, and after each monitoring well sampled, the stainless steel housing of the bladder pump is decontaminated in a pre-rinse, a Liquinox bath, and subsequently rinsed with deionized water. IDW including purged groundwater, polyethylene bailers, bailer twine,

polyethylene tubing, and Teflon bladders are stockpiled in one or more sealed 55-gallon drums during each sampling event, and transported off-site at periodic intervals. Following collection in laboratory-supplied containers, groundwater samples are stored on site with wet ice as a preservative and delivered to the designated lab under chain-of-custody protocols.

2.0 MILESTONES COMPLETED SINCE OCTOBER 5, 2016

Since October 2016, Clearwater has installed two new groundwater monitoring wells to be used in the groundwater remedial system. The following paragraph discusses the installation.

2.1 Installation of Additional POD Wells

Clearwater, after receiving approval from the offsite property owners, installed two new groundwater monitoring wells to be used as Point of Demonstration (POD) wells, as requested by the GAEPD. One is located between the abandoned MW-14 and MW-10 wells and one located along the drainage feature between MW-10 and MW-15. These wells have been installed and will be surveyed and placed on the Figures for the October 2017 Progress Report. Clearwater will sample these wells in the April 2017 sampling event and include them in future Quarterly Verification Well and Compliance Well sampling events.

3.0 MILESTONES IN-PROGRESS OR TO BE COMPLETED

The milestones that are either in-progress or to be completed at the Rayloc property are outlined in the following sections.

3.1 Source Area Remediation

Clearwater and Genuine Parts Company have identified and tentatively scheduled soil blending remediation of the source area impact for this summer. This work is to be conducted by Redox Tech, LLC (Redox) and will include excavation and treatment of the top 30 feet of impacted soil and in-situ treatment of impacted soil from 30 to 40 feet using a rotary drum blender using either potassium permanganate or an enhanced reductive dechlorination using Redox's ABC+ product. Redox anticipates that this work will be completed within 2 to 3 months, weather permitting.

Prior to performing the soil blending activities, Clearwater has initiated a gravity fed in-situ chemical oxidation (ISCO) using sodium persulfate in six (6) existing injection wells in the source area in an to attempt to accelerate the groundwater remedial process. This work was initiated in order to best utilize the existing groundwater injection wells in the source area prior to losing them to the soil blending project when they will be removed to allow the soil blending activities. Based on our monthly groundwater sampling, there has been a significant reduction in PCE concentrations in the three (3) source area monitoring wells.

3.2 Former Parts Disassembly and Cleaning Area (PDA) Remedial System

Clearwater has operated an Air Sparge/Soil Vapor Extraction (AS/SVE) system in the former PDA area since April 2015 which utilizes gas-infusion technology.

Environmental X_2 Contracting, Inc. (X2) is a remedial contractor at Rayloc and has active remedial systems in both the site groundwater and the PDA area.

Since March 2016, 90% of the PCE mass in the treatment area has been reduced. To expedite the remaining PCE, a gravity fed in-situ chemical oxidation (ISCO) using sodium persulfate and hydrogen in existing injection wells was initiated in January 2017 in 7 injection wells instead of just 3. Effluent from the activated carbon exhaust was non-detect or only had minimal detections for VOCs from October November of 2016 to March 2017. The carbon is changed out upon breakthrough. Please refer to Appendix D for a copy of the X2 Soil Remediation Status Report.

Clearwater will continue to collect verification soil samples from the same locations within the PDA area quarterly to compare results allowing X_2 to adjust injection or extraction flows and/or gas concentrations to provide more effective remediation of the impact. Please refer to Table 1 for a summary of historical PDA sampling results and Figure 2 for a figure showing the PDA sampling locations and March 2017 sampling

event results. December 2016 and March 2017 PDA laboratory data are located in Appendix A. The X_2 PDA Soil Remediation Status Report is located in Appendix D.

3.3 Groundwater Remedial System

In early October 2015, as part of the November 12, 2015 Performance Management Plan (PMP), Clearwater collected groundwater samples from the twenty (20) compliance wells at the Rayloc facility. These compliance wells are scheduled to be sampled again in October 2017 (every other October). Therefore the October 2015 Compliance Groundwater Sampling (Figure 4), Potentiometric Surface (Figure 5) and Isoconcentration map (Figure 6) are again included in this report although the associated tables, laboratory data, and field logs from the VRP Semi-Annual Progress Report #6 are not included.

The groundwater remediation system is continuously monitored, maintained and cleaned as needed. The system has operated continuously with hydrogen pulsed at 2.5% to minimize interference from methane production, something identified during 2016.

Between September 2015 and October 2016, the source area groundwater contamination has been reduced significantly while the downgradient contamination has been relatively unchanged, although daughter products have been identified indicating that the chlorinated solvent PCE is being remediated. Clearwater anticipates that after the soil blending activity is complete and the source is removed, removal of contaminants migrating downgradient from the source area can be more readily remediated.

X2 has provided the following technical summary of the groundwater remedial operations in the appended report:

This report provides a technical summary of groundwater remedial operations during the period September 2016 through January 2017. There was significant reduction in PCE concentrations throughout the source area, a moderate decrease in the downgradient Area 2, and a small increase in the offsite Area 3. However, there was substantial generation of CIS-1,2 Dichloroethene daughter product in Area 2, indicating that a high level of reduction is occurring as greater mass of PCE migrates into the area.

Please refer to Table 2 for a summary of the Historical X2 Remedial System Sampling Results, Figure 3 for a figure showing the December 2016 X2 Remedial System Sampling Results, and Figure 7 for a figure showing the December 2016 X2 Remedial System Isoconcentration Map. December 2016 laboratory data is located in Appendix B, Sampling Logs are located in Appendix C, and the X2 Groundwater Remediation Status Report is located in Appendix D.

3.4 Complete Horizontal and Vertical Delineation

Although much of the impacted groundwater has been delineated, Clearwater is in the process of further delineating the groundwater impact at the Rayloc property. The soil impact within the Rayloc building (PDA Area) is being addressed as previously discussed.

3.5 Vapor-Intrusion Investigation (Rayloc Building)

Soil-vapor samples will be collected from locations within the Rayloc building to determine whether chlorinated solvents in the site groundwater may have migrated to the building area. These samples will be collected upon completion of the remediation of the impact in the Parts Disassembly & Cleaning Area. This Area is located in an unused area of the Rayloc building, away from currently used areas. The only area currently being consistently used is the high-ceilinged warehouse where trucks are loaded and unloaded through bay doors using forklifts.

4.0 CERTIFICATIONS

4.1 Professional Geologist Certification

"I certify under penalty of law that this report and all attachments were prepared by me or under my direct supervision in accordance with the Voluntary Remediation Program Act (O.C.G.A. Section 12-8-101, et seq.). I am a professional geologist who is registered with the Georgia State Board of Registration for Professional Geologists and I have the necessary experience and am in charge of the investigation and remediation of this release of regulated substances.

Furthermore, to document my direct oversight of the Voluntary Remediation Plan development, implementation of corrective action, and long term monitoring, I have attached a monthly summary of hours invoiced and description of services provided by me to the Voluntary Remediation Program participant since the previous submittal to the Georgia Environmental Protection Division.

The information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations."

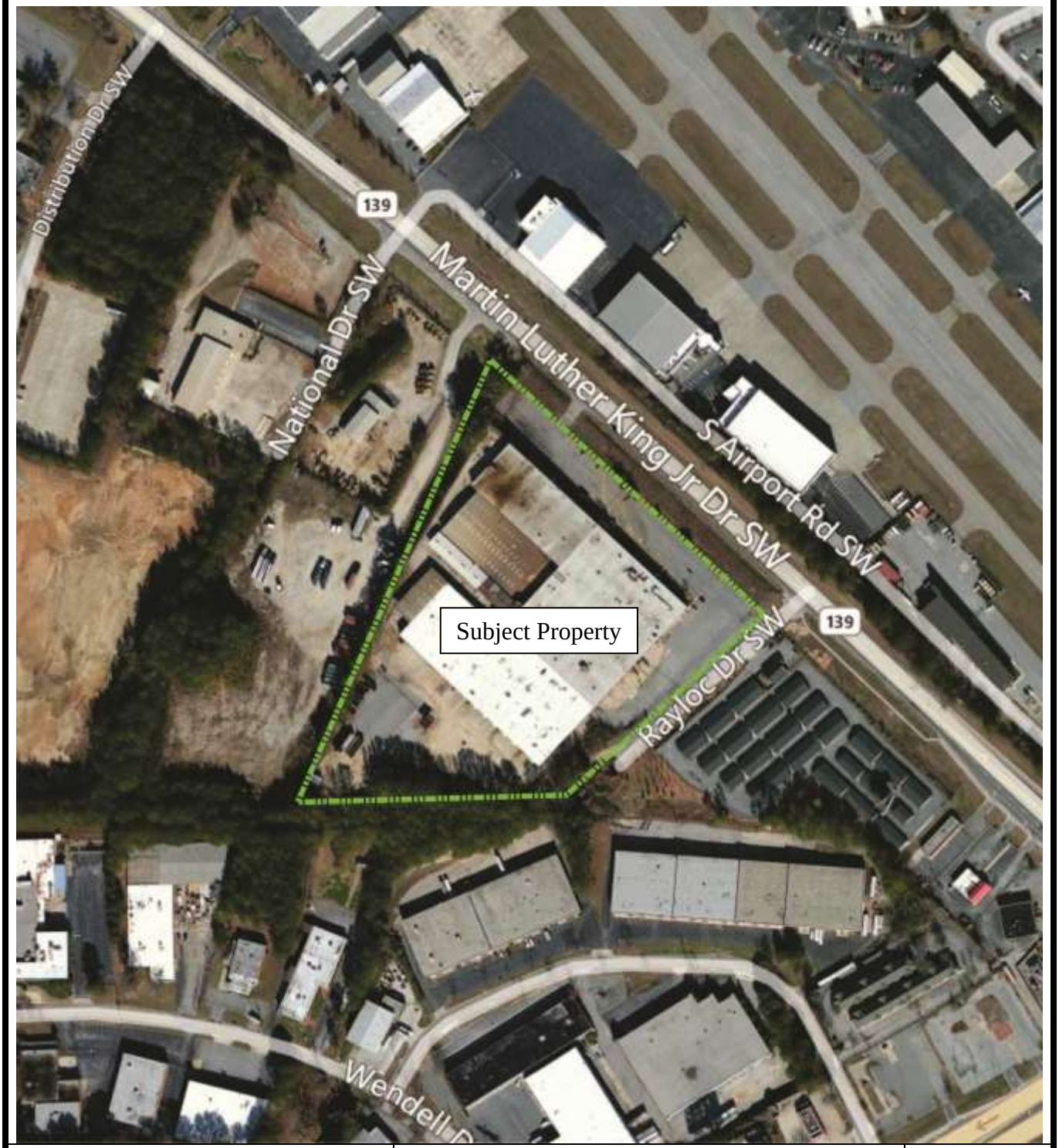
Please refer to Table 3 for a Summary of Professional Oversight Hours.

Jack A. Wintle P.G.
Senior Environmental Geologist

Date: April 7, 2017

Geologist Seal

FIGURES



Legend		Figure 1 – Site Aerial Map	Scale
Map Source: Google Earth	N	**Rayloc Facility** **600 Rayloc Drive** **Atlanta, Fulton County, Georgia**	NTS
Map Date: 10-31-2012		**CLEARWATER ENVIRONMENTAL RESOURCES, LLC** **3870 Peachtree Industrial Boulevard** **Suite 340139** **Duluth, Georgia 30096**	
Project No.: **1502-1-3**	JAW		

ADD-2	5'	10'
Cis -	4.22	7.10
PCE -	26.2	8.89
TCE -	1.61	3.52
VC -	<0.216	<0.201

ADD-1	6'	10'
Cis -	5.34	2.34
PCE -	22.2	56.9
TCE -	1.63	1.79
VC -	<0.212	<0.430

WD-11 @ 10'	
Cis -	2.80
PCE -	141
TCE -	2.79
VC -	<2.18

WD-8 @ 5'	
Cis -	<7.24
PCE -	<7.24
TCE -	526
VC -	<7.24

WD-4 @ 10'	
Cis -	<4.37
PCE -	487
TCE -	33.2
VC -	<4.37

WD-2 @ 10'	
Cis -	0.263
PCE -	5.30
TCE -	<0.197
VC -	<0.197

PD-2 @ 10'	
Cis -	<0.196
PCE -	<0.196
TCE -	2.59
VC -	<0.196

PDA-E-7
ADD-2
WD-9
PDA-I-6
PDA-E-6
ADD-1
PDA-E-10
PDA-I-8
PDA-E-11
WD-1
WD-4
PDA-I-5
WD-11
WD-8
PDA-E-5
PD-1
PDA-E-9
PDA-I-7
PDA-I-4
WD-2
WD-10
PDA-E-4
WD-5
WD-12
PDA-I-3
PDA-E-8
PD-2
PDA-E-3
WD-3
PDA-I-2
WD-6
PD-3
PDA-E-2
PDA-I-1
WD-7
PDA-E-1

LOCATION OF FORMER
PARTS DISASSEMBLY
AND CLEANING AREA

LEGEND

- Soil Sample Boring
- Injection/Extraction Well

MW-##	
Cis -	##
PCE -	##
TCE -	##
VC -	##

Monitoring Well Identification Tag
Cis - Cis-1-2-Dichloroethene
PCE - Tetrachloroethene
TCE - Trichloroethene
VC - Vinyl chloride

Results in ppm

0 5' 10'
Approximate Scale In Feet

N

Note: PDA Sampling Results (03/09/2017)

CLEARWATER ENVIRONMENTAL RESOURCES, LLC

Drawing:	Rayloc_PDA 4-1-2017.dwg	FIGURE 2
Revision #:	0	March 2017 PDA Sampling Results
Date:	03/2017	RAYLOC FACILITY
Project #:	1502-1-3	MARCH 2017

Rayloc_PDA 4-1-2017.dwg

MW-4
MW-3
MW-5A
MW-5
MW-2
MW-1
MW-22
MW-21
MW-6A
MW-6
(Abandoned)
MW-23
PT-1
RAD-1
(Abandoned)
RAD-4
RAD-2
RAD-3
(Abandoned)
RAD-5
PT-2
MW-12
MW-24
MW-13
PT-3
MW-20
MW-9
MW-16
MW-18
MW-14
(Abandoned)
MW-8
MW-7
MW-17
MW-15
MW-19
MW-10
MW-11
(Abandoned)

MW-22 @ 60'	
Cis -	491
PCE -	1580
TCE -	140
VC -	<10.0

MW-21 @ 60'	
Cis -	<25.0
PCE -	1110
TCE -	<25.0
VC -	<10.0

MW-23 @ 60'	
Cis -	1780
PCE -	1670
TCE -	397
VC -	<10.0

MW-24 @ 30'	
Cis -	271
PCE -	200
TCE -	56.8
VC -	<2.00

PT-3 @ 60'	
Cis -	473
PCE -	11300
TCE -	742
VC -	<40.0

MW-12 @ 60'	
Cis -	24.2
PCE -	327
TCE -	16.4
VC -	<2.00

MW-20 @ 60'	
Cis -	72.3
PCE -	1230
TCE -	102
VC -	<4.00

MW-7 @ 30'	
Cis -	16.2
PCE -	42.0
TCE -	9.85
VC -	<2.00

MW-17 @ 30'	
Cis -	399
PCE -	920
TCE -	172
VC -	<4.00

MW-15 @ 30"	
Cis -	132
PCE -	<5.00
TCE -	<5.00
VC -	147

MW-19 @ 30'	
Cis -	59.7
PCE -	<5.00
TCE -	<5.00
VC -	9.45

MARTIN LUTHER KING DRIVE (200' R/W)
CASE
RENT RITE
LOADING DOCK
METAL SHED
RAYLOC BUILDING
1 STORY BRICK WAREHOUSE
SIP INDUSTRIES
PATRICK DRIVE (60' R/W)
GREEN CEMETARY
RAILROAD SPUR (50' R/W)
B&D CONCRETE CUTTING
CENTRAL PIPE & SUPPLY FORMERLY PRINTPACK
PARKING
DRIVE
500 INTERCHANGE WAREHOUSE
1 STORY BRICK
PETT SPICE
HOUSING AUTHORITY OF FULTON COUNTY (FORMER MCSC)
20' DRIVE
B&D CONCRETE CUTTING INC.
INTERCHANGE DR. (ASPHALT)
SELIG
WENDELL DR (60' R/W) (ASPHALT)
BLDG
1 STORY BRICK
2 STORY MOTEL
RAVINE
FORMER MOSELY MOTEL
FULTON INDUSTRIAL BLVD (200' R/W)
STATE 20

240' 120' 0 240' Feet

LEGEND

Monitoring Well Location
Property Line

MW-##	
Cis -	##
PCE -	##
TCE -	##
VC -	##

Monitoring Well Identification Tag
Cis - Cis-1-2-Dichloroethene
PCE - Tetrachloroethene
TCE - Trichloroethene
VC - Vinyl chloride

Results in ppb

Rayloc 4-1-2017.dwg

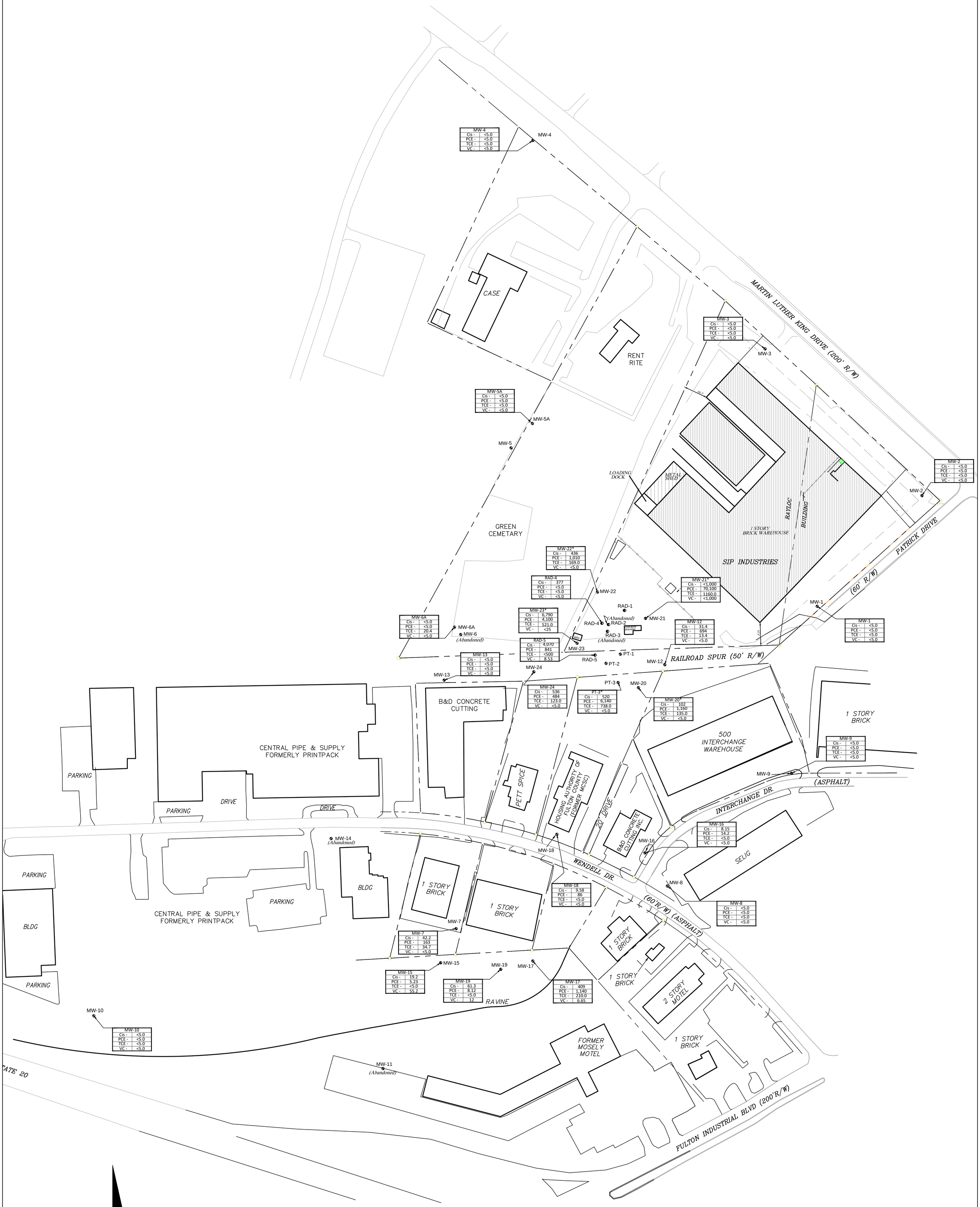
CLEARWATER ENVIRONMENTAL RESOURCES, LLC

Drawing:	Rayloc 4-1-2017.dwg	FIGURE 3
Revision #:	0	December 2016 REMEDIAL SYSTEM SAMPLING RESULTS
Date:	03/2017	RAYLOC FACILITY
Project #:	1502-1-3	MARCH 2017

Clearwater Environmental Resources, LLC
September 2016

Genuine Parts Company
Atlanta, GA

MW-20 @ 60'



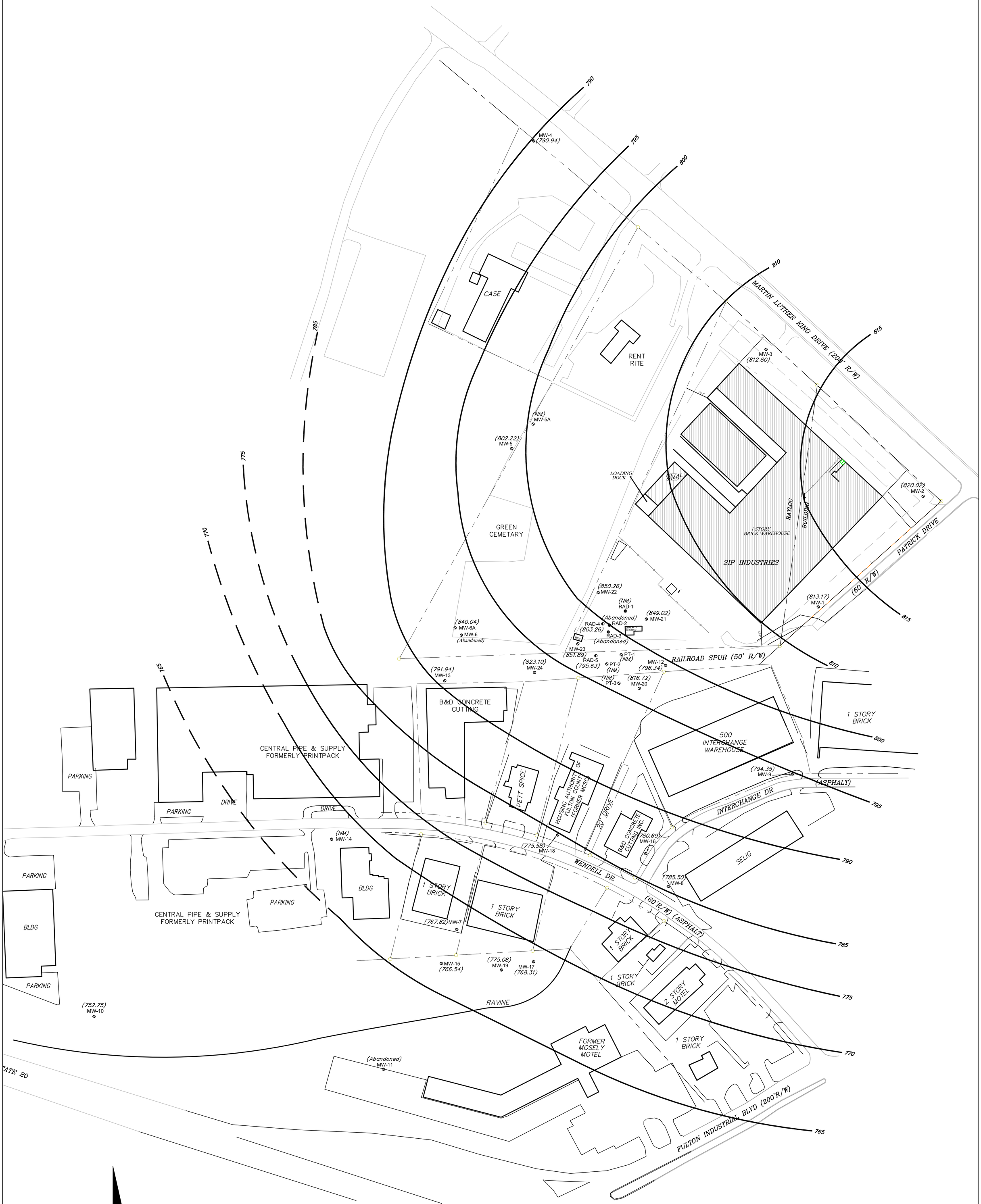
Rayloc Sept2016.dwg

CLEARWATER ENVIRONMENTAL RESOURCES, LLC

Drawing:	Rayloc Sept2016.dwg	FIGURE 4
Revision #:	0	OCTOBER 2015 COMPLIANCE WELL SAMPLING RESULTS
Date:	09/2016	RAYLOC FACILITY
Project #:	1502-1-3	SEPTEMBER 2016

Clearwater Environmental Resources, LLC
October 2015

Genuine Parts Company
Atlanta, GA



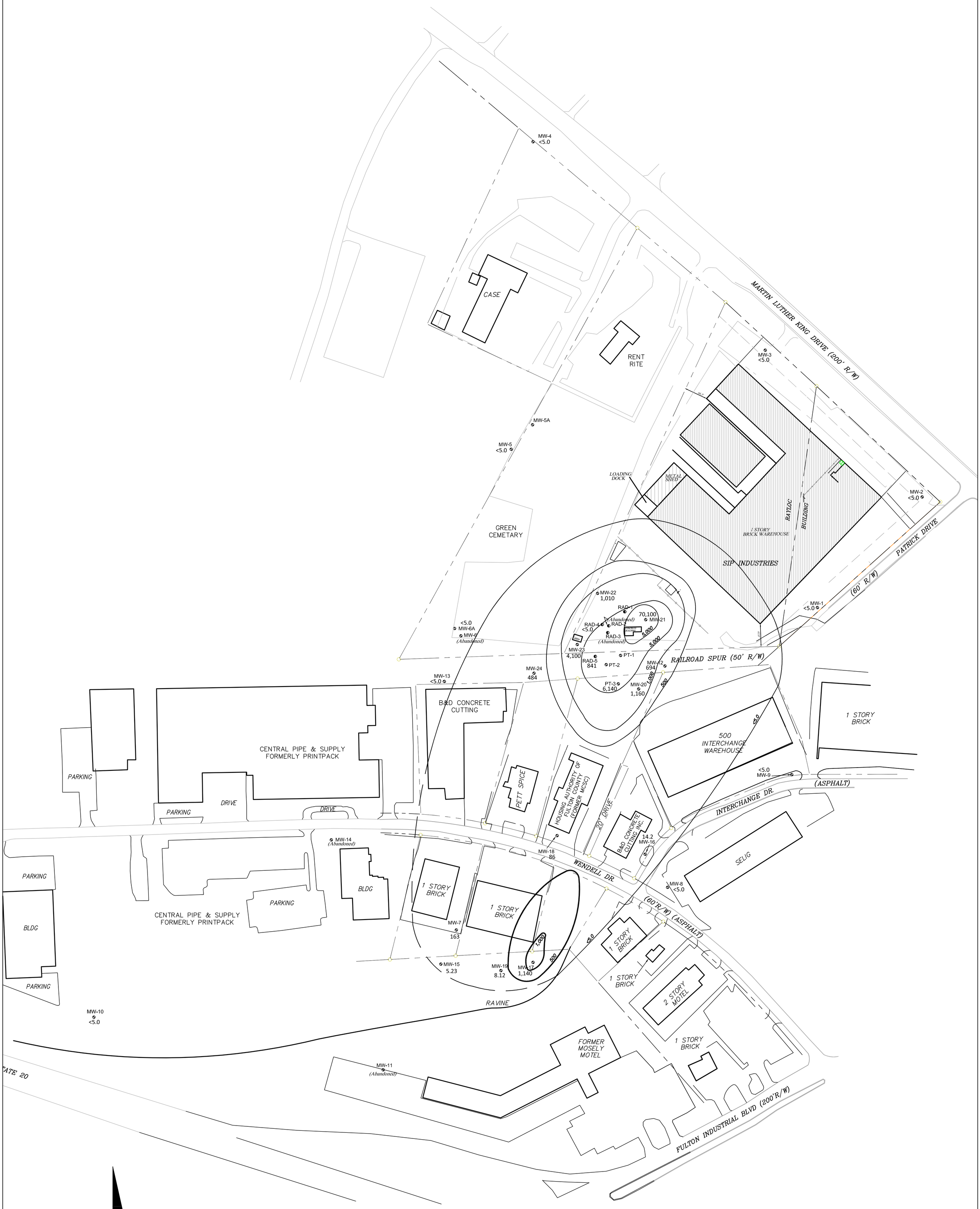
CLEARWATER ENVIRONMENTAL RESOURCES, LLC

Drawing:	Rayloc 4-1-2017.dwg	FIGURE 5
Revision #:	0	OCTOBER 2015 POTENTIOMETRIC-SURFACE MAP
Date:	03/2017	RAYLOC FACILITY
Project #:	1502-1-3	MARCH 2017

Rayloc 4-1-2017.dwg

Clearwater Environmental Resources, LLC
October 2015

Genuine Parts Company
Atlanta, GA

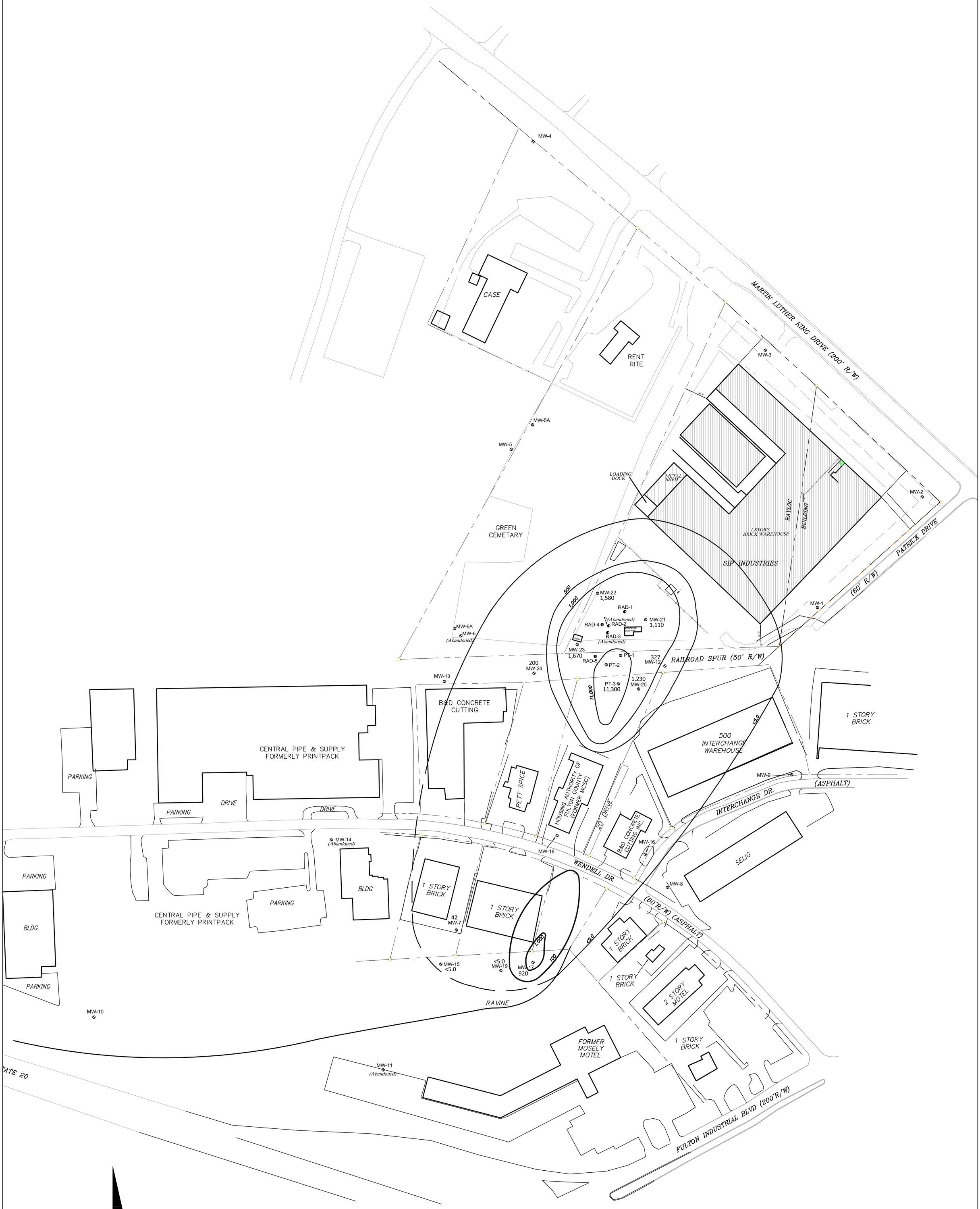


Rayloc 4-1-2017.dwg

CLEARWATER ENVIRONMENTAL RESOURCES, LLC	*Drawing:* Rayloc 4-1-2017.dwg	FIGURE 6
	Revision #: 0	OCTOBER 2015 PCE ISOCONCENTRATION MAP
	Date: 03/2017	RAYLOC FACILITY
	Project #: 1502-1-3	MARCH 2017

Sage Environmental Consulting, L.P.
October 2015

Genuine Parts Company
Atlanta, GA



Rayloc 4-6-2017.dwg

CLEARWATER ENVIRONMENTAL RESOURCES, LLC

Drawing:	Rayloc 4-6-2017.dwg	FIGURE 7
Revision #:	0	DECEMBER 2016 PCE ISOCONCENTRATION MAP
Date:	03/2017	RAYLOC FACILITY
Project #:	1502-1-3	MARCH 2017

Sage Environmental Consulting, L.P.
October 2015

Genuine Parts Company
Atlanta, GA

TABLES

Table 1
Historical Quarterly PDA Sampling Results
Semi-Annual Progress Report #7

April 2017
Rayloc Facility
HSI# 10547

Sample Location	PD-2	PD-2	PD-2	PD-2	PD-2	PD-2	PD-2	PD-2	PD-2	PD-2
Sample Date	1/14/2014	6/26/2015	8/20/2015	10/19/2015	12/14/2015	3/10/2016	6/8/2016	9/7/2016	12/13/2016	3/9/2017
Sample Depth	10	10	10	10	10	10	10	10	10	10
1,2,4-Trimethylbenzene	0.404	<0.238	<0.193	<2.43	<0.183	<0.233	<0.187	<0.396	<0.004	<0.196
1,2-Dichlorobenzene	--	<0.238	<0.193	<2.43	<0.183	<0.233	<0.187	<0.396	<0.004	<0.196
1,2-Dichloroethane	0.404	<0.238	<0.193	<2.43	<0.183	<0.233	<0.187	<0.396	<0.004	<0.196
1,2-Dichloroethene (Total)	--	<0.476	<0.193	<2.43	<0.183	<0.233	0.591	<0.792	<0.004	<0.196
1,3,5-Trimethylbenzene	0.404	<0.238	<0.193	<2.43	<0.183	<0.233	<0.187	<0.396	<0.004	<0.196
1,4-Dichlorobenzene	0.404	<0.238	<0.193	<2.43	<0.183	<0.233	<0.187	<0.396	<0.004	<0.196
2-Butanone	0.404	<0.238	<0.193	<2.43	<0.183	<0.233	<0.187	<0.396	<0.004	<0.196
Acetone	2.02	<1.19	<0.967	<1.03	<0.913	<1.16	<0.934	<1.98	<0.019	<0.980
Benzene	0.404	<0.238	<0.193	<2.43	<0.183	<0.233	<0.187	<0.396	<0.004	<0.196
Bromomethane	--	<0.238	<0.193	<2.43	<0.183	<0.233	<0.187	<0.396	<0.004	<0.196
Carbon Disulfide	--	<0.238	<0.193	<2.43	<0.183	<0.233	<0.187	<0.396	<0.004	<0.196
Cis-1,2-dichloroethene	1.73	0.312	0.197	2.35	0.366	<0.233	0.572	<0.396	0.006	<0.196
Ethylbenzene	0.404	<0.238	<0.193	<2.43	<0.183	<0.233	<0.187	<0.396	<0.004	<0.196
m,p-Xylene	--	<0.476	<0.193	<2.43	<0.183	<0.233	<0.187	<0.396	<0.004	<0.196
o-Xylene	--	<0.238	<0.193	<2.43	<0.183	<0.233	<0.187	<0.396	<0.004	<0.196
Naphthalene	0.404	<0.238	<0.193	<2.43	<0.183	<0.233	<0.187	<0.396	<0.004	<0.196
Styrene	0.404	<0.238	<0.193	<2.43	<0.183	<0.233	<0.187	<0.396	<0.004	<0.196
Tetrachloroethene	**115**	**4.32**	**1.00**	**13.30**	**4.76**	**1.11**	**3.57**	<0.396	0.047	**2.59**
Toluene	0.404	<0.238	<0.193	<2.43	<0.183	<0.233	<0.187	<0.396	<0.004	<0.196
Trichloroethene	**1.69**	0.445	0.415	**2.33**	0.259	<0.233	0.477	<0.396	<0.004	<0.196
Vinyl Chloride	**0.404**	<0.238	<0.193	<2.43	<0.183	<0.233	<0.187	<0.396	<0.004	<0.196
Xylenes, Total	0.807	<0.714	<0.580	<0.618	<0.548	<0.699	<0.560	<1.19	<0.011	<0.588

Notes:
NS - Not Sampled
Matrix: soil
Units: mg/kg
Indicates detection of compound greater than Type 3 HSRA RRS .

Table 2 (continued)

WD-2	WD-2	WD-2	WD-2	WD-2	WD-2	WD-2	WD-2	WD-2	WD-2
8/28/2014	6/26/2015	8/20/2015	10/19/2015	12/14/2015	3/10/2016	6/8/2016	9/7/2016	12/13/2016	3/9/2017
10	10	10	10	10	10	10	10	10	10
< 33.6	<0.209	<0.246	<0.265	<0.380	<0.525	<0.230	<0.201	<0.279	<0.197
< 33.6	<0.209	<0.246	<0.265	<0.380	<0.525	<0.230	<0.201	<0.279	<0.197
< 33.6	<0.209	<0.246	<0.265	<0.380	<0.525	<0.230	<0.201	<0.279	<0.197
< 67.2	<0.419	<0.246	<0.265	<0.380	4.55	<0.460	<0.402	<0.279	<0.197
< 33.6	<0.209	<0.246	<0.265	<0.380	<0.525	<0.230	<0.201	<0.279	<0.197
< 33.6	<0.209	<0.246	<0.265	<0.380	<0.525	<0.230	<0.201	<0.279	<0.197
< 33.6	<0.209	<0.246	<0.265	<0.380	<0.525	<0.230	<0.201	<0.279	<0.197
< 168	<1.05	<1.23	<1.33	<1.90	<2.63	<1.15	<0.201	<1.40	<0.984
< 33.6	<0.209	<0.246	<0.265	<0.380	<0.525	<0.230	<0.201	<0.279	<0.197
< 33.6	<0.209	<0.246	<0.265	<0.380	<0.525	<0.230	<0.201	<0.279	<0.197
< 33.6	<0.209	<0.246	<0.265	<0.380	<0.525	<0.230	<0.201	<0.279	<0.197
< 33.6	0.242	<0.246	<0.265	0.737	4.55	<0.230	0.298	<0.279	0.263
< 33.6	<0.209	<0.246	<0.265	<0.380	<0.525	<0.230	<0.201	<0.279	<0.197
< 33.6	<0.419	<0.246	<0.265	<0.380	<0.525	<0.230	<0.201	<0.279	<0.197
< 33.6	<0.209	<0.246	<0.265	<0.380	<0.525	<0.230	<0.201	<0.279	<0.197
< 33.6	<0.209	<0.246	<0.265	<0.380	<0.525	<0.230	<0.201	<0.279	<0.197
< 33.6	<0.209	<0.246	<0.265	<0.380	<0.525	<0.230	<0.201	<0.279	<0.197
1,670	**15**	**42.2**	**3.46**	**33.9**	**38.3**	**3.13**	**3.95**	**2.71**	**5.30**
< 33.6	<0.209	<0.246	<0.265	<0.380	<0.525	<0.230	<0.201	<0.279	<0.197
< 33.6	0.214		<0.265	**0.589**	**1.52**	<0.230	<0.201	<0.279	<0.197
< 33.6	<0.209	<0.246	<0.265	<0.380	<0.525	<0.230	<0.201	<0.279	<0.197
< 67.2	<0.628	<0.739	<0.796	<1.14	<1.58	<0.690	<0.604	<0.838	<0.588

Table 2 (continued)

WD-4	WD-4	WD-4	WD-4	WD-4	WD-4	WD-4	WD-4	WD-4	WD-4
8/28/2014	6/26/2015	8/20/2015	10/19/2015	12/14/2015	3/10/2016	6/8/2016	9/7/2016	12/13/2016	3/9/2017
10	10	10	10	10	10	10	10	10	10
< 46.5	<0.812	<0.205	<3.93	<4.04	<22.0	<2.17	3.38	<1.84	<4.37
< 46.5	<0.812	<0.205	<3.93	<4.04	<22.0	<2.17	<0.725	<1.84	<4.37
< 46.5	<0.812	<0.205	<3.93	<4.04	<22.0	<2.17	<0.725	<1.84	<4.37
< 93.0	1.94	<0.205	<3.93	<4.04	<22.0	<4.33	6.01	<1.84	<4.37
< 46.5	<0.812	<0.205	<3.93	<4.04	<22.0	<2.17	0.833	<1.84	<4.37
< 46.5	<0.812	<0.205	<3.93	<4.04	<22.0	<2.17	<0.725	<1.84	<4.37
< 46.5	<0.812	<0.205	<3.93	<4.04	<22.0	<2.17	<0.725	<1.84	<4.37
< 232	<4.06	<10.2	<3.93	<20.0	<110	<10.8	<3.62	<9.19	<21.8
< 46.5	<0.812	<0.205	<3.93	<4.04	<22.0	<2.17	<0.725	<1.84	<4.37
< 46.5	<0.812	<0.205	<3.93	<4.04	<22.0	<2.17	<0.725	<1.84	<4.37
< 46.5	<0.812	<0.205	<3.93	<4.04	<22.0	<2.17	<0.725	<1.84	<4.37
< 46.5	1.94	<0.205	**7.08**	6.51	<22.0	<2.17	5.74	2.98	<4.37
< 46.5	<0.812	<0.205	<3.93	<4.04	<22.0	<2.17	<0.725	<1.84	<4.37
< 46.5	<1.62	<0.205	<3.93	<4.04	<22.0	<2.17	<0.725	<1.84	<4.37
< 46.5	<0.812	<0.205	<3.93	<4.04	<22.0	<2.17	<0.725	<1.84	<4.37
< 46.5	<0.812	<0.205	<3.93	<4.04	<22.0	<2.17	<0.725	<1.84	<4.37
< 46.5	<0.812	<0.205	<3.93	<4.04	<22.0	<2.17	<0.725	<1.84	<4.37
2,190	**142**	**61.3**	**317**	**619**	**1280**	**137**	**99.2**	**218**	**487**
< 46.5	<0.812	<0.205	<3.93	<4.04	<22.0	<2.17	<0.725	<1.84	<4.37
< 46.5	4.89	<0.205	**6.12**	**9.24**	**<22.0**	**2.28**	**3.91**	**3.39**	**33.2**
< 46.5	<0.812	<0.205	<3.93	<4.04	<22.0	<2.17	<0.725	<1.84	<4.37
< 93.0	<2.43	<6.14	<11.8	<12.1	<66.0	<6.50	<2.17	<5.51	<13.1

Table 2 (continued)

WD-8	WD-8	WD-8	WD-8	WD-8	WD-8	WD-8	WD-8	WD-8	WD-8
11/17/2014	6/26/2015	8/20/2015	10/19/2015	12/14/2015	3/10/2016	6/8/2016	9/7/2016	12/13/2016	3/9/2017
5	5	5	5	5	5	5	5	5	5
<1.26	<17.5	<24.7	<0.996	<0.474	<27.1	<0.251	<0.232	<23.6	<7.24
<1.26	<17.5	<24.7	<0.996	<0.474	<27.1	<0.251	<0.232	<23.6	<7.24
<1.26	<17.5	<24.7	<0.996	<0.474	<27.1	<0.251	<0.232	<23.6	<7.24
<2.53	<35.1	<24.7	<0.996	<0.474	<27.1	6.31	6.50	<23.6	<7.24
<1.26	<17.5	<24.7	<0.996	<0.474	<27.1	<0.251	<0.232	<23.6	<7.24
<1.26	<17.5	<24.7	<0.996	<0.474	<27.1	<0.251	<0.232	<23.6	<7.24
<1.26	<17.5	<24.7	<0.996	<0.474	<27.1	<0.251	<0.232	<23.6	<7.24
<6.32	<87.6	<123	<0.996	<2.37	<135	<1.26	<1.16	<118	<36.2
<1.26	<17.5	<24.7	<0.996	<0.474	<27.1	<0.251	<0.232	<23.6	<7.24
<1.26	<17.5	<24.7	<0.996	<0.474	<27.1	<0.251	<0.232	<23.6	<7.24
<1.26	<17.5	<24.7	<0.996	<0.474	<27.1	<0.251	<0.232	<23.6	<7.24
<1.26	<17.5	<24.7	**8.74**	**11.1**	**30.6**	6.28	6.47	<23.6	<7.24
<1.26	<17.5	<24.7	<0.996	<0.474	<27.1	<0.251	<0.232	<23.6	<7.24
<1.26	<35.1	<24.7	<0.996	<0.474	<27.1	<0.251	<0.232	<23.6	<7.24
<1.26	<17.5	<24.7	<0.996	<0.474	<27.1	<0.251	<0.232	<23.6	<7.24
<1.26	<17.5	<24.7	<0.996	<0.474	<27.1	<0.251	<0.232	<23.6	<7.24
<1.26	<17.5	<24.7	<0.996	<0.474	<27.1	<0.251	<0.232	<23.6	<7.24
60.6	**1,660**	**1,920**	**43**	**52**	**2,590**	**34.8**	**29**	**2,880**	**526**
<1.26	<17.5	<24.7	<0.996	<0.474	<27.1	<0.251	<0.232	<23.6	<7.24
<1.26	**<17.5**	**<24.7**	**1.87**	**2.29**	**<27.1**	**1.21**	**1.25**	**<23.6**	<7.24
<1.26	<17.5	<24.7	<0.996	<0.474	<27.1	<0.251	<0.232	<23.6	<7.24
<2.53	<52.6	<74	<2.99	<1.42	<81.2	<0.754	<0.697	<70.8	<21.7

Table 2 (continued)

WD-11	WD-11	WD-11	WD-11	WD-11	WD-11	WD-11	WD-11	WD-11	WD-11
11/17/2014	6/26/2015	8/20/2015	10/19/2015	12/14/2015	3/10/2016	6/8/2016	9/7/2016	12/13/2016	3/9/2017
10	10	10	10	10	10	10	10	10	10
<0.925	<0.832	<20.3	<4.21	<0.414	<4.51	<0.460	<0.282	<0.880	<2.18
<0.925	<0.832	<20.3	<4.21	<0.414	<4.51	<0.460	<0.282	<0.880	<2.18
<0.925	<0.832	<20.3	<4.21	<0.414	<4.51	<0.460	<0.282	<0.880	<2.18
<1.85	<3.61	<20.3	<8.43	<0.414	<4.51	2.21	<0.563	<0.880	<2.18
<0.925	<0.832	<20.3	<4.21	<0.414	<4.51	<0.460	<0.282	<0.880	<2.18
<0.925	<0.832	<20.3	<4.21	<0.414	<4.51	<0.460	<0.282	<0.880	<2.18
<0.925	<0.832	<20.3	<4.21	<0.414	<4.51	<0.460	<0.282	<0.880	<2.18
<4.62	<4.16	<101	<21.1	<2.07	<22.6	<2.30	<1.41	<0.880	<10.9
<0.925	<0.832	<20.3	<4.21	<0.414	<4.51	<0.460	<0.282	<4.40	<2.18
<0.925	<0.832	<20.3	<4.21	<0.414	<4.51	<0.460	<0.282	<0.880	<2.18
<0.925	<0.832	<20.3	<4.21	<0.414	<4.51	<0.460	<0.282	<0.880	<2.18
1.57	3.61	<20.3	<4.21	1.2	<4.51	2.21	<0.282	1.67	2.80
<0.925	<0.832	<20.3	<4.21	<0.414	<4.51	<0.460	<0.282	<0.880	<2.18
<0.925	<1.66	<20.3	<4.21	<0.414	<4.51	<0.460	<0.282	<0.880	<2.18
<0.925	<0.832	<20.3	<4.21	<0.414	<4.51	<0.460	<0.282	<0.880	<2.18
<0.925	<0.832	<20.3	<4.21	<0.414	<4.51	<0.460	<0.282	<0.880	<2.18
<0.925	<0.832	<20.3	<4.21	<0.414	<4.51	<0.460	<0.282	<0.880	<2.18
150.0	**108**	**<20.3**	**381**	**56.2**	**238**	**68.8**	**10.1**	**140**	**141**
<0.925	<0.832	<20.3	<4.21	<0.414	<4.51	<0.460	<0.282	<0.880	<2.18
2.2	**2.53**	**<20.3**	**<4.21**	**1.08**	**<4.51**	**1.26**	<0.282	**1.4**	**2.79**
<0.925	<0.832	<20.3	<4.21	<0.414	<4.51	<0.460	<0.282	<0.880	<2.18
<1.85	<2.50	<60.9	<12.6	<1.24	<13.5	<1.38	<0.845	<2.64	<6.53

Table 2 (continued)

ADD-1	**ADD-1**	**ADD-1**	**ADD-1**	**ADD-1**	**ADD-1**	**ADD-1**	**ADD-1**	**ADD-1**	**ADD-1**	**ADD-1**	**ADD-1**	**ADD-1**	**ADD-1**
10/19/2015	**12/14/2015**	**3/10/2016**	**6/8/2016**	**9/7/2016**	**12/13/2016**	**3/9/2017**	**10/19/2015**	**12/14/2015**	**3/10/2016**	**6/8/2016**	**9/7/2016**	**12/13/2016**	**3/9/2017**
6	**6**	**6**	**6**	**6**	**6**	**6**	**10**	**10**	**10**	**10**	**10**	**10**	**10**
<0.476	<0.389	<0.468	<0.275	<0.192	<0.338	<0.212	<0.500	<0.392	<0.223	<0.217	<0.276	<2.06	<0.430
<0.476	<0.389	<0.468	<0.275	<0.192	<0.338	<0.212	<0.500	<0.392	<0.223	<0.217	<0.276	<2.06	<0.430
<0.476	<0.389	<0.468	<0.275	<0.192	<0.338	<0.212	<0.500	<0.392	<0.223	<0.217	<0.276	<2.06	<0.430
9.05	11.4	11.9	10.4	12.9	<0.338	<0.212	<0.500	5.53	3.88	7.12	1.02	<2.06	<0.430
<0.476	<0.389	<0.468	<0.275	<0.192	<0.338	<0.212	<0.500	<0.392	<0.223	<0.217	<0.276	<2.06	<0.430
<0.476	<0.389	<0.468	<0.275	<0.192	<0.338	<0.212	<0.500	<0.392	<0.223	<0.217	<0.276	<2.06	<0.430
<0.476	<0.389	<0.468	<0.275	<0.192	<0.338	<0.212	<0.500	<0.392	<0.223	<0.217	<0.276	<2.06	<0.430
<2.38	<1.95	<2.34	<1.38	<0.961	<0.338	<0.212	<2.50	<1.96	<1.12	<1.09	<1.38	<2.06	<2.15
<0.476	<0.389	<0.468	<0.275	<0.192	<1.69	<0.212	<0.500	<0.392	<0.223	<0.217	<0.276	<1.03	<0.430
<0.476	<0.389	<0.468	<0.275	<0.192	<0.338	<0.212	<0.500	<0.392	<0.223	<0.217	<0.276	<2.06	<0.430
<0.476	<0.389	<0.468	<0.275	<0.192	<0.338	<0.212	<0.500	<0.392	<0.223	<0.217	<0.276	<2.06	<0.430
9.05	**11.4**	**11.8**	**10.3**	**12.1**	4.1	5.14	<0.500	5.21	3.81	6.98	1.02	0.661	2.34
<0.476	<0.389	<0.468	<0.275	<0.192	<0.338	<0.212	<0.500	<0.392	<0.223	<0.217	<0.276	<2.06	<0.430
<0.476	<0.389	<0.468	<0.275	<0.192	<0.338	<0.212	<0.500	<0.392	<0.223	<0.217	<0.276	<2.06	<0.430
<0.476	<0.389	<0.468	<0.275	<0.192	<0.338	<0.212	<0.500	<0.392	<0.223	<0.217	<0.276	<2.06	<0.430
<0.476	<0.389	<0.468	<0.275	<0.192	<0.338	<0.212	<0.500	<0.392	<0.223	<0.217	<0.276	<2.06	<0.430
<0.476	<0.389	<0.468	<0.275	<0.192	<0.338	<0.212	<0.500	<0.392	<0.223	<0.217	<0.276	<2.06	<0.430
30.4	**46.1**	**22.5**	**44.4**	**27.2**	**16**	**22.2**	**54.9**	**31.7**	**13.7**	**29.7**	**40.2**	**53.3**	**56.9**
<0.476	<0.389	<0.468	<0.275	<0.192	<0.338	<0.212	<0.500	<0.392	<0.223	<0.217	<0.276	<2.06	<0.430
2.19	**3.74**	**3.09**	**2.67**	**3.15**	**1.10**	**1.63**	**5.36**	**3.73**	**2.92**	**4.92**	**1.81**	**0.699**	**1.79**
<0.476	<0.389	<0.468	<0.275	<0.192	<0.338	<0.212	<0.500	<0.392	<0.223	<0.217	<0.276	<2.06	<0.430
<1.43	<1.17	<1.40	<0.825	<0.577	<1.01	<0.635	<1.50	<1.18	<0.670	<0.651	<0.829	<0.617	<1.29

Table 2 (continued)

ADD-2 10/19/2015 5	ADD-2 12/14/2015 5	ADD-2 3/10/2016 5	ADD-2 6/8/2016 5	ADD-2 9/7/2016 5	ADD-2 12/13/2016 5	ADD-2 3/9/2017 5	ADD-2 10/19/2015 10	ADD-2 12/14/2015 10	ADD-2 3/10/2016 10	ADD-2 6/8/2016 10	ADD-2 9/7/2016 10	ADD-2 12/13/2016 10	ADD-2 3/9/2017 10	Type 3 RRS
<44.9	<4.26	<47.2	<0.210	<8.77	<0.697	<0.216	<2.68	<10.5	<12.4	<0.207	<0.198	NS	<0.201	NA[2]
<44.9	<4.26	<47.2	<0.210	<8.77	<0.697	<0.216	<2.68	<10.5	<12.4	<0.207	<0.198	NS	<0.201	NA[2]
<44.9	<4.26	<47.2	<0.210	<8.77	<0.697	<0.216	<2.68	<10.5	<12.4	<0.207	<0.198	NS	<0.201	NA[2]
<89.8	24.5	<47.2	4.7	<17.5	<0.697	<0.216	6.01	22.8	<12.4	7.55	9.92	NS	<0.201	NA[2]
<44.9	<4.26	<47.2	<0.210	<8.77	<0.697	<0.216	<2.68	<10.5	<12.4	<0.207	<0.198	NS	<0.201	NA[2]
<44.9	<4.26	<47.2	<0.210	<8.77	<0.697	<0.216	<2.68	<10.5	<12.4	<0.207	<0.198	NS	<0.201	NA[2]
<44.9	<4.26	<47.2	<0.210	<8.77	<0.697	<0.216	<2.68	<10.5	<12.4	<0.207	<0.198	NS	<0.201	200
<225	<21.3	<236	<1.05	<43.8	<0.697	<1.08	<2.68	<52.4	<62.1	<1.04	<0.988	NS	<1.00	400
<44.9	<4.26	<47.2	<0.210	<8.77	<3.49	<0.216	<2.68	<10.5	<12.4	<0.207	<0.198	NS	<0.201	NA[2]
<44.9	<4.26	<47.2	<0.210	<8.77	<0.697	<0.216	<2.68	<10.5	<12.4	<0.207	<0.198	NS	<0.201	NA[2]
<44.9	<4.26	<47.2	<0.210	<8.77	<0.697	<0.216	<2.68	<10.5	<12.4	<0.207	<0.198	NS	<0.201	NA[2]
<44.9	**24.5**	**<47.2**	4.7	10.6	4.11	4.22	6.01	**22.8**	**14.7**	**7.50**	**9.08**	**NS**	**7.10**	7
<44.9	<4.26	<47.2	<0.210	<8.77	<0.697	<0.216	<2.68	<10.5	<12.4	<0.207	<0.198	NS	<0.201	70
<44.9	<4.26	<47.2	<0.210	<8.77	<0.697	<0.216	<2.68	<10.5	<12.4	<0.207	<0.198	NS	<0.201	NA[2]
<44.9	<4.26	<47.2	<0.210	<8.77	<0.697	<0.216	<2.68	<10.5	<12.4	<0.207	<0.198	NS	<0.201	NA[2]
<44.9	<4.26	<47.2	<0.210	<8.77	<0.697	<0.216	<2.68	<10.5	<12.4	<0.207	<0.198	NS	<0.201	NA[2]
<44.9	<4.26	<47.2	<0.210	<8.77	<0.697	<0.216	<2.68	<10.5	<12.4	<0.207	<0.198	NS	<0.201	14
3100	**455**	**3830**	**39.6**	**1690**	**51.6**	**26.2**	**198**	**1830**	**764**	**21.7**	**11.4**	**NS**	**8.89**	0.5
<44.9	<4.26	<47.2	<0.210	<8.77	<0.697	<0.216	<2.68	<10.5	<12.4	<0.207	<0.198	NS	<0.201	100
48.7	**37.4**	**72.1**	**1.63**	**22.7**	**2.18**	**1.61**	**6.26**	**61.6**	**35.7**	**3.61**	**4.26**	**NS**	**3.52**	0.5
<44.9	<4.26	<47.2	<0.210	<8.77	<0.697	<0.216	<2.68	<10.5	<12.4	<0.207	<0.198	NS	<0.201	0.2
<135	<12.8	<141	<0.631	<26.3	<2.09	<0.647	<8.03	<31.4	<37.3	<0.622	<0.593	NS	<0.602	1,000

Table 2

Summary of X² Remedial System Sampling Results
Semi-Annual Progress Report #7

April 2017

HSI Site Numbers 10547

Atlanta, Georgia

Analyte		1,1-Dichloroethane	1,1-Dichloroethene	Acetone	Benzene	cis-1,2-DCE	Dichloroflouromethane	Methylene Chloride	Tetrachloroethene	Trichloroethene	Trichlorofluoromethane	Vinyl Chloride	Xylenes (Total)	1,2-Dichlorobenzene	Chlorobenzene	Chloroform	Ethylbenzene	Isopropylbenzene	Styrene	Toluene	Trans-1,2-dichloroethene	Carbon Disulfide
Sample Location	**Date**																					
MW-7 @ 30'	Mar-15	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	**6.31**	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
	Jun-15	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	**8.01**	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
	Sep-15	<5.0	<5.0	<5.0	<5.0	**9.72**	<5.0	<5.0	**28.6**	7.75	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
	Dec-15	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	**10.3**	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
	Feb-16	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
	Jun-16	<5.0	<5.0	<5.0	<5.0	6.9	<5.0	<5.0	**8**	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
	Sep-16	<5.0	<5.0	<5.0	<5.0	**7.87**	<5.0	<5.0	**26.6**	**5.69**	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
	Dec-16	<5.0	<5.0	<5.0	<5.0	**16.2**	<5.0	<5.0	**42**	**9.85**	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
MW-12 @ 60'	Mar-15	<10.0	<10.0	<10.0	<10.0	**34.3**	<10.0	<10.0	**901**	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
	Jun-15	<25.0	<25.0	<25.0	<25.0	**87.9**	<25.0	<25.0	**1600**	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0
	Sep-15	<25.0	<25.0	<25.0	<25.0	**17.7**	<25.0	<25.0	**538**	12.6	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0
	Dec-15	<25.0	<25.0	<25.0	<25.0	**19.5**	<25.0	<25.0	**667**	10.9	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0
	Feb-16	<10.0	<10.0	<10.0	<10.0	**29.8**	<10.0	<10.0	**867**	<10.0	<10.0	<4.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
	Jun-16	<10.0	<10.0	<10.0	<10.0	**90**	<10.0	<10.0	**1400**	**19**	<10.0	<4.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
	Sep-16	<10.0	<10.0	<10.0	<10.0	**28.5**	<10.0	<10.0	**563**	**17.5**	<10.0	<4.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
	Dec-16	<5.0	<5.0	<5.0	<5.0	**24.2**	<5.0	<5.0	**327**	**16.4**	<5.0	<1.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
MW-15 @ 30'	Mar-15	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
	Jun-15	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
	Sep-15	<5.0	<5.0	<5.0	<5.0	16.9	<5.0	<5.0	<5.0	<5.0	<5.0	**97.7**	<15.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
	Dec-15	<5.0	<5.0	**5.34**	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	**2.18**	<15.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
	Feb-16	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<2.0	<15.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
	Jun-16	<5.0	<5.0	<5.0	<5.0	18	<5.0	<5.0	<5.0	<5.0	<5.0	24	<15.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
	Sep-16	<5.0	<5.0	<5.0	<5.0	**83.7**	<5.0	<5.0	<5.0	<5.0	<5.0	**194**	<15.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
	Dec-16	<5.0	<5.0	<5.0	<5.0	**132**	<5.0	<5.0	<5.0	<5.0	<5.0	**147**	<15.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
MW-17 @ 25'	Mar-17	<5.0	<5.0	<5.0	<5.0	**361**	<5.0	<5.0	**969**	**161**	<5.0	<10.0	<15.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
	Jun-15	<10.0	<10.0	<10.0	<10.0	**383**	<10.0	<10.0	**916**	**235**	<10.0	<10.0	<30.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
	Sep-15	<10.0	<10.0	<10.0	<10.0	**409**	<10.0	<10.0	**1090**	**219**	<10.0	<10.0	<30.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
	Dec-15	<10.0	<10.0	<10.0	<10.0	**377**	<10.0	<10.0	**952**	**206**	<10.0	**3.56**	<30.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
	Feb-16	<10.0	<10.0	<10.0	<10.0	**392**	<10.0	<10.0	**978**	**179**	<10.0	<4.0	<30.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
	Jun-16	<10.0	<10.0	<10.0	<10.0	**470**	<10.0	<10.0	**1,300**	**280**	<10.0	<4.0	<30.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
	Sep-16	<10.0	<10.0	<10.0	<10.0	**375**	<10.0	<10.0	**862**	**189**	<10.0	<4.0	<30.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
	Dec-16	<10.0	<10.0	<10.0	<10.0	**399**	<10.0	<10.0	**920**	**172**	<10.0	<4.0	<30.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
MW-19 @ 30'	Mar-17	<5.0	<5.0	<5.0	<5.0	**53.9**	<5.0	<5.0	<5.0	<5.0	<5.0	**6.68**	<15.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
	Jun-15	<5.0	<5.0	<5.0	<5.0	**36.5**	<5.0	<5.0	<5.0	<5.0	<5.0	**<5.0**	<15.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
	Sep-15	<5.0	<5.0	<5.0	<5.0	**31.7**	<5.0	<5.0	<5.0	<5.0	<5.0	**7.49**	<15.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
	Dec-15	<5.0	<5.0	<5.0	<5.0	**62.8**	<5.0	<5.0	<5.0	<5.0	<5.0	**6.62**	<15.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
	Feb-16	<5.0	<5.0	<5.0	<5.0	**33.7**	<5.0	<5.0	<5.0	<5.0	<5.0	**2.84**	<15.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
	Jun-16	<5.0	<5.0	<5.0	<5.0	**27**	<5.0	<5.0	<5.0	<5.0	<5.0	**3**	<15.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
	Sep-16	<5.0	<5.0	<5.0	<5.0	**81.6**	<5.0	<5.0	**49.8**	<5.0	<5.0	**14.8**	<15.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
	Dec-16	<5.0	<5.0	<5.0	<5.0	**59.7**	<5.0	<5.0	**<5.0**	<5.0	<5.0	**9.45**	<15.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0

Notes:

The analytical results that exceed the laboratory detection limits are bolded.

ug/L = micrograms per Liter

NS = Not Sampled

Table 2 (continued)

Analyte		1,1-Dichloroethane	1,1-Dichloroethene	Acetone	Benzene	cis-1,2-DCE	Dichloroflouromethane	Methylene Chloride	Tetrachloroethene	Trichloroethene	Trichlorofluoromethane	Vinyl Chloride	Xylenes (Total)	1,2-Dichlorobenzene	Chlorobenzene	Chloroform	Ethylbenzene	Isopropylbenzene	Styrene	Toluene	Trans-1,2-dichloroethene	Carbon Disulfide
Sample Location	**Date**																					
MW-20 @ 60'	Mar-15	<25.0	<25.0	<25.0	<25.0	**1,380**	<25.0	<25.0	**2,070**	**248**	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0
	Jun-15	<10.0	<10.0	<10.0	<10.0	**383**	<10.0	<10.0	**1,220**	**153**	<10.0	<10.0	<30.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
	Sep-15	<10.0	<10.0	<10.0	<10.0	**102**	<10.0	<10.0	**1,160**	**133**	<10.0	<10.0	<30.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
	Dec-15	<10.0	<10.0	<10.0	<10.0	**152**	<10.0	<10.0	**1,460**	**113**	<10.0	<10.0	<30.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
	Feb-16	<25.0	<25.0	<25.0	<25.0	**1,200**	<25.0	<25.0	**2,360**	**330**	<25.0	<10.0	<75.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
	Jun-16	<25.0	<25.0	<25.0	<25.0	**99**	<25.0	<25.0	**2,000**	**170**	<25.0	<10.0	<75.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
	Sep-16	<25.0	<25.0	<25.0	<25.0	**61.2**	<25.0	<25.0	**1,600**	**113**	<25.0	<10.0	<75.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
	Dec-16	<10.0	<10.0	<10.0	<10.0	**72**	<10.0	<10.0	**1,230**	**102**	<10.0	<10.0	<30.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
MW-21 @ 60'	Mar-15	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	**7,680**	**81.1**	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0
	Jun-15	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	**4,900**	**88.3**	<25.0	<25.0	<75.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0
	Sep-15	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	**70,100**	**1610**	<25.0	<25.0	<75.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0
	Dec-15	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	**6,180**	**169**	<25.0	<25.0	<75.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0
	Feb-16	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	**2,700**	**53.2**	<50.0	<20.0	<150.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0
	Jun-16	<50.0	<50.0	<50.0	<50.0	**10**	<50.0	<50.0	**4,100**	**240**	<50.0	<20.0	<150.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0
	Sep-16	<250	<250	<250	<250	<250	<250	<250	**16,100**	<250	<250	<100.0	<750.0	<250	<250	<250	<250	<250	<250	<250	<250	<250
	Dec-16	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	**1,110**	<25.0	<25.0	<25.0	<75.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0
MW-22 @ 60'	Mar-15	<50.0	<50.0	<50.0	<50.0	**4,600**	<50.0	<50.0	**921**	**357**	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0
	Jun-15	<10.0	<10.0	<10.0	<10.0	**2,730**	<10.0	<10.0	**892**	**139**	<10.0	<10.0	<30.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
	Sep-15	<10.0	<10.0	<10.0	<10.0	**436**	<10.0	<10.0	**1,010**	**169**	<10.0	<10.0	<30.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
	Dec-15	<10.0	<10.0	<10.0	<10.0	**2,550**	<10.0	<10.0	**1,150**	**292**	<10.0	<10.0	<30.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
	Feb-16	<50.0	<50.0	<50.0	<50.0	**4,440**	<50.0	<50.0	**395**	**306**	<50.0	**28.7**	<150.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0
	Jun-16	<50.0	<50.0	<50.0	<50.0	**250**	<50.0	<50.0	**1,500**	**150**	<50.0	<2.0	<150.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0
	Sep-16	<5.0	<5.0	<25.0	<5.0	**167**	<10	<5.0	**1,090**	**113**	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<10	<5.0	<5.0
	Dec-16	<25.0	<25.0	<25.0	<25.0	**491**	<25.0	<25.0	**1,580**	**140**	<25.0	<25.0	<50.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0
MW-23 @ 60'	Mar-15	<25.0	<25.0	<25.0	<25.0	**3,220**	<25.0	<25.0	**2,160**	**476**	<25.0	<25.0	<75.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0
	Jun-15	<25.0	<25.0	<25.0	<25.0	**2,730**	<25.0	<25.0	**2,050**	**618**	<25.0	<25.0	<75.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0
	Sep-15	<25.0	<25.0	<25.0	<25.0	**6,790**	<25.0	<25.0	**4,100**	**521**	<25.0	<25.0	<75.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0
	Dec-15	<25.0	<25.0	<25.0	<25.0	**3,480**	<25.0	<25.0	**1,880**	**547**	<25.0	<25.0	<75.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0
	Feb-16	<25.0	<25.0	<25.0	<25.0	**1,570**	<25.0	<25.0	**1,170**	**306**	<25.0	<10.0	<75.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0
	Jun-16	<25.0	<25.0	<25.0	<25.0	**1,900**	<25.0	<25.0	**2,600**	**490**	<25.0	<10.0	<75.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0
	Sep-16	<25.0	<25.0	<25.0	<25.0	**2,500**	<25.0	<25.0	**2,920**	**597**	<25.0	<10.0	<75.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0
	Dec-16	<25.0	<25.0	<25.0	<25.0	**1,780**	<25.0	<25.0	**1,670**	**397**	<25.0	<10.0	<75.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0
MW-24 @ 30'	Mar-15	<5.0	<5.0	<5.0	<5.0	**599**	<5.0	<5.0	**392**	**116**	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
	Jun-15	<5.0	<5.0	<5.0	<5.0	**575**	<5.0	<5.0	**386**	**166**	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
	Sep-15	<5.0	<5.0	<5.0	<5.0	**196**	<5.0	<5.0	**150**	**40.6**	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
	Dec-15	<5.0	<5.0	<5.0	<5.0	**399**	<5.0	<5.0	**280**	**94.1**	<5.0	<5.0	<15.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
	Feb-16	<5.0	<5.0	<5.0	<5.0	**512**	<5.0	<5.0	**347**	**104**	<5.0	<2.0	<15.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
	Jun-16	<5.0	<5.0	<5.0	<5.0	**310**	<5.0	<5.0	**220**	**67**	<5.0	<2.0	<15.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
	Sep-16	<5.0	<5.0	<5.0	<5.0	**175**	<5.0	<5.0	**162**	**36.2**	<5.0	<2.0	<15.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
	Dec-16	<5.0	<5.0	<5.0	<5.0	**271**	<5.0	<5.0	**200**	**56.8**	<5.0	<2.0	<15.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
PT-3 @ 60'	Mar-15	<250	<250	**1,460**	<250	**27,300**	<250	<250	**5,140**	**895**	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250
	Jun-15	<100	<100	**923**	<100	**27,300**	<100	<100	**11,300**	**811**	<100	<100	<300	<100	<100	<100	<100	<100	<100	<100	<100	<100
	Sep-15	<100	<100	<100	<100	**520**	<100	<100	**6,140**	**520**	<100	<100	<300	<100	<100	<100	<100	<100	<100	<100	<100	<100
	Dec-15	<100	<100	**5.34**	<100	**418**	<100	<100	**9,320**	**680**	<100	<100	<300	<100	<100	<100	<100	<100	<100	<100	<100	<100
	Feb-16	<100	<100	<100	<100	**2,240**	<100	<100	**8,100**	**741**	<100	<40.0	<300	<100	<100	<100	<100	<100	<100	<100	<100	<100
	Jun-16	<100	<100	<50	<100	**980**	<100	<100	**18,000**	**1,500**	<100	**3.5**	<300	<100	<100	<100	<100	<100	<100	<100	<100	<100
	Sep-16	<250	<250	<250	<250	**684**	<250	<250	**16,200**	**1,020**	<250	**<250**	<750	<250	<250	<250	<250	<250	<250	<250	<250	<250
	Dec-16	<100	<100	<100	<100	**473**	<100	<100	**11,300**	**742**	<100	<100	<200	<100	<100	<100	<100	<100	<100	<100	<100	<100

Notes:

The analytical results that exceed the laboratory detection limits are bolded.

ug/L = micrograms per Liter

NS = Not Sampled

TABLE 3

Summary of Professional Oversight Hours
Semi-Annual Progress Report #7
April 2017
Rayloc Facility
HSI# 10547

Month	Hours
November	46
December	42
January	60
February	48
March	46
April	22

APPENDIX A
DECEMBER 2016 & MARCH 2017 PDA LABORATORY REPORTS

ANALYTICAL RESULTS

PERFORMED BY

GCAL, LLC
7979 Innovation Park Dr.
Baton Rouge, LA 70820

Report Date 12/23/2016

GCAL Report 216121601

Project Rayloc

Deliver To	***Additional Recipients***
Jack Wintle Clearwater Env. Resources Peachtree Industrial blvd Duluth, GA 30096 678-491-4601	NONE

Laboratory Endorsement

Sample analysis was performed in accordance with approved methodologies provided by the Environmental Protection Agency or other recognized agencies. The samples and their corresponding extracts will be maintained for a period of 30 days unless otherwise arranged. Following this retention period the samples will be disposed in accordance with GCAL's Standard Operating Procedures.

Common Abbreviations that may be Utilized in this Report

ND	Indicates the result was Not Detected at the specified reporting limit
NO	Indicates the sample did not ignite when preliminary test performed for EPA Method 1030
DO	Indicates the result was Diluted Out
MI	Indicates the result was subject to Matrix Interference
TNTC	Indicates the result was Too Numerous To Count
SUBC	Indicates the analysis was Sub-Contracted
FLD	Indicates the analysis was performed in the Field
DL	Detection Limit
DL	Diluted analysis – when appended to Client Sample ID
LOD	Limit of Detection
LOQ	Limit of Quantitation
RE	Re-analysis
CF	HPLC or GC Confirmation
00:01	Reported as a time equivalent to 12:00 AM

Reporting Flags that may be Utilized in this Report

J or I	Indicates the result is between the MDL and LOQ
J	DOD flag on analyte in the parent sample for MS/MSD outside acceptance criteria
U	Indicates the compound was analyzed for but not detected
B or V	Indicates the analyte was detected in the associated Method Blank
Q	Indicates a non-compliant QC Result (See Q Flag Application Report)
*****	Indicates a non-compliant or not applicable QC recovery or RPD – see narrative
E	The result is estimated because it exceeded the instrument calibration range
E	Metals - % diference for the serial dilution is > 10%
P	RPD between primary and confirmation result is greater than 40

Sample receipt at GCAL is documented through the attached chain of custody. In accordance with NELAC, this report shall be reproduced only in full and with the written permission of GCAL. The results contained within this report relate only to the samples reported. The documented results are presented within this report.

This report pertains only to the samples listed in the Report Sample Summary and should be retained as a permanent record thereof. The results contained within this report are intended for the use of the client. Any unauthorized use of the information contained in this report is prohibited.

I certify that this data package is in compliance with The NELAC Institute (TNI) Standard 2009 and terms and conditions of the contract and Statement of Work both technically and for completeness, for other than the conditions in the case narrative. Release of the data contained in this hardcopy data package and in the computer readable data submitted has been authorized by the Quality Assurance Manager or his/her designee, as verified by the following signature.

Estimated uncertainty of measurement is available upon request. This report is in compliance with the DOD QSM as specified in the contract if applicable.

Authorized Signature
GCAL Report 216121601

Certifications

Certification	Certification Number
DOD ELAP	L14-243
Alabama	01955
Arkansas	12-060-0
Colorado	01955
Delaware	01955
Florida	E87854
Georgia	01955
Hawaii	01955
Idaho	01955
Illinois	200048
Indiana	01955
Kansas	E-10354
Kentucky	95
Louisiana	01955
Maryland	01955
Massachusetts	01955
Michigan	01955
Mississippi	01955
Missouri	01955
Montana	N/A
Nebraska	01955
New Mexico	01955
North Carolina	618
North Dakota	R-195
Oklahoma	9403
South Carolina	73006001
South Dakota	01955
Tennessee	01955
Texas	T104704178
Vermont	01955
Virginia	460215
USDA Soil Permit	P330-10-00117

Case Narrative

Client: Clearwater Environmental Resources **Report:** 216121601

Gulf Coast Analytical Laboratories received and analyzed the sample(s) listed on the Report Sample Summary page of this report. Receipt of the sample(s) is documented by the attached chain of custody. This applies only to the sample(s) listed in this report. No sample integrity or quality control exceptions were identified unless noted below.

VOLATILES MASS SPECTROMETRY

In the EPA 8260B analysis, samples 21612160103 (WD-4 @ 10'), 21612160104 (WD-8 @ 5), 21612160105 (WD-11 @ 10'), 21612160106 (ADD-1 @ 6'), 21612160107 (ADD-1 @ 10'), and 21612160108 (ADD-2 @ 5') had to be diluted due to the presence of non-target background and to bracket the concentration of target analytes within the calibration range of the instrument. The dilutions are reflected in elevated detection limits.

In the EPA 8260B analysis, sample 21612160102 (WD-2 @ 10') had to be diluted to bracket the concentration of target compounds within the calibration range of the instrument. The dilution is reflected in elevated detection limits.

In the EPA 8260B analysis for analytical batch 601181, the LCS and/or LCSD recoveries are above the upper control limit for 1,1-Dichloroethene. This analyte was not detected in the associated samples.

Sample Summary

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21612160101	PD-2 @ 10	Solid	12/13/2016 09:01	12/15/2016 10:10
21612160102	WD-2 @ 10	Solid	12/13/2016 09:07	12/15/2016 10:10
21612160103	WD-4 @ 10	Solid	12/13/2016 08:47	12/15/2016 10:10
21612160104	WD-8 @ 5	Solid	12/13/2016 09:12	12/15/2016 10:10
21612160105	WD-11 @ 10	Solid	12/13/2016 08:54	12/15/2016 10:10
21612160106	ADD-1 @ 6	Solid	12/13/2016 08:30	12/15/2016 10:10
21612160107	ADD-1 @ 10	Solid	12/13/2016 08:38	12/15/2016 10:10
21612160108	ADD-2 @ 5	Solid	12/13/2016 08:15	12/15/2016 10:10

Summary of Compounds Detected

PD-2 @ 10

Collect Date 12/13/2016 09:01 **GCAL ID** 21612160101
Receive Date 12/15/2016 10:10 **Matrix** Solid

EPA 8260B *Results Reported on Dry Weight Basis

CAS#	Parameter	Result	LOQ	Units
156-59-2	cis-1,2-Dichloroethene	0.00653	0.00381	mg/kg
127-18-4	Tetrachloroethene	0.047	0.00381	mg/kg

WD-2 @ 10

Collect Date 12/13/2016 09:07 **GCAL ID** 21612160102
Receive Date 12/15/2016 10:10 **Matrix** Solid

EPA 8260B *Results Reported on Dry Weight Basis

CAS#	Parameter	Result	LOQ	Units
127-18-4	Tetrachloroethene	2.71	0.279	mg/kg

WD-4 @ 10

Collect Date 12/13/2016 08:47 **GCAL ID** 21612160103
Receive Date 12/15/2016 10:10 **Matrix** Solid

EPA 8260B *Results Reported on Dry Weight Basis

CAS#	Parameter	Result	LOQ	Units
156-59-2	cis-1,2-Dichloroethene	2.98	1.84	mg/kg
127-18-4	Tetrachloroethene	218	18.4	mg/kg
79-01-6	Trichloroethene	3.39	1.84	mg/kg

WD-8 @ 5

Collect Date 12/13/2016 09:12 **GCAL ID** 21612160104
Receive Date 12/15/2016 10:10 **Matrix** Solid

EPA 8260B *Results Reported on Dry Weight Basis

CAS#	Parameter	Result	LOQ	Units
127-18-4	Tetrachloroethene	2880	236	mg/kg

Summary of Compounds Detected

WD-11 @ 10

Collect Date 12/13/2016 08:54 **GCAL ID** 21612160105
Receive Date 12/15/2016 10:10 **Matrix** Solid

EPA 8260B *Results Reported on Dry Weight Basis

CAS#	Parameter	Result	LOQ	Units
156-59-2	cis-1,2-Dichloroethene	1.67	0.880	mg/kg
127-18-4	Tetrachloroethene	140	8.80	mg/kg
79-01-6	Trichloroethene	1.40	0.880	mg/kg

ADD-1 @ 6

Collect Date 12/13/2016 08:30 **GCAL ID** 21612160106
Receive Date 12/15/2016 10:10 **Matrix** Solid

EPA 8260B *Results Reported on Dry Weight Basis

CAS#	Parameter	Result	LOQ	Units
540-59-0	1,2-Dichloroethene(Total)	4.11	0.676	mg/kg
156-59-2	cis-1,2-Dichloroethene	4.11	0.338	mg/kg
127-18-4	Tetrachloroethene	16.0	3.38	mg/kg
79-01-6	Trichloroethene	1.10	0.338	mg/kg

ADD-1 @ 10

Collect Date 12/13/2016 08:38 **GCAL ID** 21612160107
Receive Date 12/15/2016 10:10 **Matrix** Solid

EPA 8260B *Results Reported on Dry Weight Basis

CAS#	Parameter	Result	LOQ	Units
540-59-0	1,2-Dichloroethene(Total)	0.661	0.411	mg/kg
156-59-2	cis-1,2-Dichloroethene	0.661	0.206	mg/kg
127-18-4	Tetrachloroethene	53.3	4.11	mg/kg
79-01-6	Trichloroethene	0.699	0.206	mg/kg

ADD-2 @ 5

Collect Date 12/13/2016 08:15 **GCAL ID** 21612160108
Receive Date 12/15/2016 10:10 **Matrix** Solid

EPA 8260B *Results Reported on Dry Weight Basis

CAS#	Parameter	Result	LOQ	Units
540-59-0	1,2-Dichloroethene(Total)	4.11	1.39	mg/kg
156-59-2	cis-1,2-Dichloroethene	4.11	0.697	mg/kg
127-18-4	Tetrachloroethene	51.6	6.97	mg/kg
79-01-6	Trichloroethene	2.18	0.697	mg/kg

Sample Results

PD-2 @ 10	**Collect Date**	12/13/2016 09:01	**GCAL ID**	21612160101
	Receive Date	12/15/2016 10:10	**Matrix**	Solid

EPA 8260B *Results Reported on Dry Weight Basis

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	1	12/20/2016 14:39	JCK	601181

CAS#	Parameter	Result	LOQ	Units
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.00381	mg/kg
71-55-6	1,1,1-Trichloroethane	ND	0.00381	mg/kg
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.00381	mg/kg
79-00-5	1,1,2-Trichloroethane	ND	0.00381	mg/kg
75-34-3	1,1-Dichloroethane	ND	0.00381	mg/kg
75-35-4	1,1-Dichloroethene	ND	0.00381	mg/kg
563-58-6	1,1-Dichloropropene	ND	0.00381	mg/kg
96-18-4	1,2,3-Trichloropropane	ND	0.00381	mg/kg
120-82-1	1,2,4-Trichlorobenzene	ND	0.00381	mg/kg
95-63-6	1,2,4-Trimethylbenzene	ND	0.00381	mg/kg
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.00381	mg/kg
106-93-4	1,2-Dibromoethane	ND	0.00381	mg/kg
95-50-1	1,2-Dichlorobenzene	ND	0.00381	mg/kg
107-06-2	1,2-Dichloroethane	ND	0.00381	mg/kg
540-59-0	1,2-Dichloroethene(Total)	ND	0.00763	mg/kg
78-87-5	1,2-Dichloropropane	ND	0.00381	mg/kg
108-67-8	1,3,5-Trimethylbenzene	ND	0.00381	mg/kg
541-73-1	1,3-Dichlorobenzene	ND	0.00381	mg/kg
142-28-9	1,3-Dichloropropane	ND	0.00381	mg/kg
106-46-7	1,4-Dichlorobenzene	ND	0.00381	mg/kg
594-20-7	2,2-Dichloropropane	ND	0.00381	mg/kg
78-93-3	2-Butanone	ND	0.00381	mg/kg
95-49-8	2-Chlorotoluene	ND	0.00381	mg/kg
591-78-6	2-Hexanone	ND	0.00381	mg/kg
106-43-4	4-Chlorotoluene	ND	0.00381	mg/kg
99-87-6	4-Isopropyltoluene	ND	0.00381	mg/kg
108-10-1	4-Methyl-2-pentanone	ND	0.00381	mg/kg
67-64-1	Acetone	ND	0.019	mg/kg
71-43-2	Benzene	ND	0.00381	mg/kg
108-86-1	Bromobenzene	ND	0.00381	mg/kg
74-97-5	Bromochloromethane	ND	0.00381	mg/kg
75-27-4	Bromodichloromethane	ND	0.00381	mg/kg
75-25-2	Bromoform	ND	0.00381	mg/kg
74-83-9	Bromomethane	ND	0.00381	mg/kg
75-15-0	Carbon disulfide	ND	0.00381	mg/kg
56-23-5	Carbon tetrachloride	ND	0.00381	mg/kg
108-90-7	Chlorobenzene	ND	0.00381	mg/kg
75-00-3	Chloroethane	ND	0.00381	mg/kg
67-66-3	Chloroform	ND	0.00381	mg/kg
74-87-3	Chloromethane	ND	0.00381	mg/kg
156-59-2	**cis-1,2-Dichloroethene**	**0.00653**	**0.00381**	**mg/kg**
10061-01-5	cis-1,3-Dichloropropene	ND	0.00381	mg/kg
124-48-1	Dibromochloromethane	ND	0.00381	mg/kg
74-95-3	Dibromomethane	ND	0.00381	mg/kg
75-71-8	Dichlorodifluoromethane	ND	0.00381	mg/kg
100-41-4	Ethylbenzene	ND	0.00381	mg/kg
87-68-3	Hexachlorobutadiene	ND	0.00381	mg/kg

Sample Results

PD-2 @ 10

Collect Date	12/13/2016 09:01	**GCAL ID**	21612160101
Receive Date	12/15/2016 10:10	**Matrix**	Solid

EPA 8260B (Continued) *Results Reported on Dry Weight Basis

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	1	12/20/2016 14:39	JCK	601181

CAS#	Parameter	Result	LOQ	Units
98-82-8	Isopropylbenzene (Cumene)	ND	0.00381	mg/kg
136777-61-2	m,p-Xylene	ND	0.00763	mg/kg
75-09-2	Methylene chloride	ND	0.00763	mg/kg
91-20-3	Naphthalene	ND	0.00381	mg/kg
104-51-8	n-Butylbenzene	ND	0.00381	mg/kg
103-65-1	n-Propylbenzene	ND	0.00381	mg/kg
95-47-6	o-Xylene	ND	0.00381	mg/kg
135-98-8	sec-Butylbenzene	ND	0.00381	mg/kg
100-42-5	Styrene	ND	0.00381	mg/kg
1634-04-4	tert-Butyl methyl ether (MTBE)	ND	0.00381	mg/kg
98-06-6	tert-Butylbenzene	ND	0.00381	mg/kg
127-18-4	**Tetrachloroethene**	**0.047**	**0.00381**	**mg/kg**
108-88-3	Toluene	ND	0.00381	mg/kg
156-60-5	trans-1,2-Dichloroethene	ND	0.00381	mg/kg
10061-02-6	trans-1,3-Dichloropropene	ND	0.00381	mg/kg
110-57-6	trans-1,4-Dichloro-2-butene	ND	0.00381	mg/kg
79-01-6	Trichloroethene	ND	0.00381	mg/kg
75-69-4	Trichlorofluoromethane	ND	0.00381	mg/kg
76-13-1	Trichlorotrifluoroethane	ND	0.00381	mg/kg
75-01-4	Vinyl chloride	ND	0.00381	mg/kg
1330-20-7	Xylene (total)	ND	0.011	mg/kg

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	0.0340	.037	ug/Kg	108	62 - 127
1868-53-7	Dibromofluoromethane	0.0340	.034	ug/Kg	100	65 - 130
2037-26-5	Toluene d8	0.0340	.038	ug/Kg	111	71 - 132
17060-07-0	1,2-Dichloroethane-d4	0.0340	.036	ug/Kg	104	62 - 125

WD-2 @ 10

Collect Date	12/13/2016 09:07	**GCAL ID**	21612160102
Receive Date	12/15/2016 10:10	**Matrix**	Solid

EPA 8260B *Results Reported on Dry Weight Basis

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	50	12/18/2016 14:34	BLY	601036

CAS#	Parameter	Result	LOQ	Units
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.279	mg/kg
71-55-6	1,1,1-Trichloroethane	ND	0.279	mg/kg
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.279	mg/kg
79-00-5	1,1,2-Trichloroethane	ND	0.279	mg/kg
75-34-3	1,1-Dichloroethane	ND	0.279	mg/kg

Sample Results

WD-2 @ 10	**Collect Date**	12/13/2016 09:07	**GCAL ID**	21612160102
	Receive Date	12/15/2016 10:10	**Matrix**	Solid

EPA 8260B (Continued) *Results Reported on Dry Weight Basis

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	50	12/18/2016 14:34	BLY	601036

CAS#	Parameter	Result	LOQ	Units
75-35-4	1,1-Dichloroethene	ND	0.279	mg/kg
563-58-6	1,1-Dichloropropene	ND	0.279	mg/kg
96-18-4	1,2,3-Trichloropropane	ND	0.279	mg/kg
120-82-1	1,2,4-Trichlorobenzene	ND	0.279	mg/kg
95-63-6	1,2,4-Trimethylbenzene	ND	0.279	mg/kg
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.279	mg/kg
106-93-4	1,2-Dibromoethane	ND	0.279	mg/kg
95-50-1	1,2-Dichlorobenzene	ND	0.279	mg/kg
107-06-2	1,2-Dichloroethane	ND	0.279	mg/kg
540-59-0	1,2-Dichloroethene(Total)	ND	0.559	mg/kg
78-87-5	1,2-Dichloropropane	ND	0.279	mg/kg
108-67-8	1,3,5-Trimethylbenzene	ND	0.279	mg/kg
541-73-1	1,3-Dichlorobenzene	ND	0.279	mg/kg
142-28-9	1,3-Dichloropropane	ND	0.279	mg/kg
106-46-7	1,4-Dichlorobenzene	ND	0.279	mg/kg
594-20-7	2,2-Dichloropropane	ND	0.279	mg/kg
78-93-3	2-Butanone	ND	0.279	mg/kg
95-49-8	2-Chlorotoluene	ND	0.279	mg/kg
591-78-6	2-Hexanone	ND	0.279	mg/kg
106-43-4	4-Chlorotoluene	ND	0.279	mg/kg
99-87-6	4-Isopropyltoluene	ND	0.279	mg/kg
108-10-1	4-Methyl-2-pentanone	ND	0.279	mg/kg
67-64-1	Acetone	ND	1.40	mg/kg
71-43-2	Benzene	ND	0.279	mg/kg
108-86-1	Bromobenzene	ND	0.279	mg/kg
74-97-5	Bromochloromethane	ND	0.279	mg/kg
75-27-4	Bromodichloromethane	ND	0.279	mg/kg
75-25-2	Bromoform	ND	0.279	mg/kg
74-83-9	Bromomethane	ND	0.279	mg/kg
75-15-0	Carbon disulfide	ND	0.279	mg/kg
56-23-5	Carbon tetrachloride	ND	0.279	mg/kg
108-90-7	Chlorobenzene	ND	0.279	mg/kg
75-00-3	Chloroethane	ND	0.279	mg/kg
67-66-3	Chloroform	ND	0.279	mg/kg
74-87-3	Chloromethane	ND	0.279	mg/kg
156-59-2	cis-1,2-Dichloroethene	ND	0.279	mg/kg
10061-01-5	cis-1,3-Dichloropropene	ND	0.279	mg/kg
124-48-1	Dibromochloromethane	ND	0.279	mg/kg
74-95-3	Dibromomethane	ND	0.279	mg/kg
75-71-8	Dichlorodifluoromethane	ND	0.279	mg/kg
100-41-4	Ethylbenzene	ND	0.279	mg/kg
87-68-3	Hexachlorobutadiene	ND	0.279	mg/kg
98-82-8	Isopropylbenzene (Cumene)	ND	0.279	mg/kg
136777-61-2	m,p-Xylene	ND	0.559	mg/kg
75-09-2	Methylene chloride	ND	0.559	mg/kg
91-20-3	Naphthalene	ND	0.279	mg/kg
104-51-8	n-Butylbenzene	ND	0.279	mg/kg

Sample Results

WD-2 @ 10

Collect Date	12/13/2016 09:07	**GCAL ID**	21612160102
Receive Date	12/15/2016 10:10	**Matrix**	Solid

EPA 8260B (Continued) *Results Reported on Dry Weight Basis

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	50	12/18/2016 14:34	BLY	601036

CAS#	Parameter	Result	LOQ	Units
103-65-1	n-Propylbenzene	ND	0.279	mg/kg
95-47-6	o-Xylene	ND	0.279	mg/kg
135-98-8	sec-Butylbenzene	ND	0.279	mg/kg
100-42-5	Styrene	ND	0.279	mg/kg
1634-04-4	tert-Butyl methyl ether (MTBE)	ND	0.279	mg/kg
98-06-6	tert-Butylbenzene	ND	0.279	mg/kg
127-18-4	**Tetrachloroethene**	**2.71**	**0.279**	**mg/kg**
108-88-3	Toluene	ND	0.279	mg/kg
156-60-5	trans-1,2-Dichloroethene	ND	0.279	mg/kg
10061-02-6	trans-1,3-Dichloropropene	ND	0.279	mg/kg
110-57-6	trans-1,4-Dichloro-2-butene	ND	0.279	mg/kg
79-01-6	Trichloroethene	ND	0.279	mg/kg
75-69-4	Trichlorofluoromethane	ND	0.279	mg/kg
76-13-1	Trichlorotrifluoroethane	ND	0.279	mg/kg
75-01-4	Vinyl chloride	ND	0.279	mg/kg
1330-20-7	Xylene (total)	ND	0.838	mg/kg

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	2.36	2.18	ug/Kg	92	62 - 127
1868-53-7	Dibromofluoromethane	2.36	2.62	ug/Kg	111	65 - 130
2037-26-5	Toluene d8	2.36	2.33	ug/Kg	99	71 - 132
17060-07-0	1,2-Dichloroethane-d4	2.36	2.75	ug/Kg	116	62 - 125

WD-4 @ 10

Collect Date	12/13/2016 08:47	**GCAL ID**	21612160103
Receive Date	12/15/2016 10:10	**Matrix**	Solid

EPA 8260B *Results Reported on Dry Weight Basis

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	500	12/18/2016 17:30	JCK	601036

CAS#	Parameter	Result	LOQ	Units
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.84	mg/kg
71-55-6	1,1,1-Trichloroethane	ND	1.84	mg/kg
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.84	mg/kg
79-00-5	1,1,2-Trichloroethane	ND	1.84	mg/kg
75-34-3	1,1-Dichloroethane	ND	1.84	mg/kg
75-35-4	1,1-Dichloroethene	ND	1.84	mg/kg
563-58-6	1,1-Dichloropropene	ND	1.84	mg/kg
96-18-4	1,2,3-Trichloropropane	ND	1.84	mg/kg
120-82-1	1,2,4-Trichlorobenzene	ND	1.84	mg/kg
95-63-6	1,2,4-Trimethylbenzene	ND	1.84	mg/kg

Sample Results

WD-4 @ 10	**Collect Date**	12/13/2016 08:47	**GCAL ID**	21612160103
	Receive Date	12/15/2016 10:10	**Matrix**	Solid

EPA 8260B (Continued)

*Results Reported on Dry Weight Basis

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	500	12/18/2016 17:30	JCK	601036

CAS#	Parameter	Result	LOQ	Units
96-12-8	1,2-Dibromo-3-chloropropane	ND	1.84	mg/kg
106-93-4	1,2-Dibromoethane	ND	1.84	mg/kg
95-50-1	1,2-Dichlorobenzene	ND	1.84	mg/kg
107-06-2	1,2-Dichloroethane	ND	1.84	mg/kg
540-59-0	1,2-Dichloroethene(Total)	ND	3.68	mg/kg
78-87-5	1,2-Dichloropropane	ND	1.84	mg/kg
108-67-8	1,3,5-Trimethylbenzene	ND	1.84	mg/kg
541-73-1	1,3-Dichlorobenzene	ND	1.84	mg/kg
142-28-9	1,3-Dichloropropane	ND	1.84	mg/kg
106-46-7	1,4-Dichlorobenzene	ND	1.84	mg/kg
594-20-7	2,2-Dichloropropane	ND	1.84	mg/kg
78-93-3	2-Butanone	ND	1.84	mg/kg
95-49-8	2-Chlorotoluene	ND	1.84	mg/kg
591-78-6	2-Hexanone	ND	1.84	mg/kg
106-43-4	4-Chlorotoluene	ND	1.84	mg/kg
99-87-6	4-Isopropyltoluene	ND	1.84	mg/kg
108-10-1	4-Methyl-2-pentanone	ND	1.84	mg/kg
67-64-1	Acetone	ND	9.19	mg/kg
71-43-2	Benzene	ND	1.84	mg/kg
108-86-1	Bromobenzene	ND	1.84	mg/kg
74-97-5	Bromochloromethane	ND	1.84	mg/kg
75-27-4	Bromodichloromethane	ND	1.84	mg/kg
75-25-2	Bromoform	ND	1.84	mg/kg
74-83-9	Bromomethane	ND	1.84	mg/kg
75-15-0	Carbon disulfide	ND	1.84	mg/kg
56-23-5	Carbon tetrachloride	ND	1.84	mg/kg
108-90-7	Chlorobenzene	ND	1.84	mg/kg
75-00-3	Chloroethane	ND	1.84	mg/kg
67-66-3	Chloroform	ND	1.84	mg/kg
74-87-3	Chloromethane	ND	1.84	mg/kg
156-59-2	**cis-1,2-Dichloroethene**	**2.98**	**1.84**	**mg/kg**
10061-01-5	cis-1,3-Dichloropropene	ND	1.84	mg/kg
124-48-1	Dibromochloromethane	ND	1.84	mg/kg
74-95-3	Dibromomethane	ND	1.84	mg/kg
75-71-8	Dichlorodifluoromethane	ND	1.84	mg/kg
100-41-4	Ethylbenzene	ND	1.84	mg/kg
87-68-3	Hexachlorobutadiene	ND	1.84	mg/kg
98-82-8	Isopropylbenzene (Cumene)	ND	1.84	mg/kg
136777-61-2	m,p-Xylene	ND	3.68	mg/kg
75-09-2	Methylene chloride	ND	3.68	mg/kg
91-20-3	Naphthalene	ND	1.84	mg/kg
104-51-8	n-Butylbenzene	ND	1.84	mg/kg
103-65-1	n-Propylbenzene	ND	1.84	mg/kg
95-47-6	o-Xylene	ND	1.84	mg/kg
135-98-8	sec-Butylbenzene	ND	1.84	mg/kg
100-42-5	Styrene	ND	1.84	mg/kg
1634-04-4	tert-Butyl methyl ether (MTBE)	ND	1.84	mg/kg

Sample Results

WD-4 @ 10	**Collect Date**	12/13/2016 08:47	**GCAL ID**	21612160103
	Receive Date	12/15/2016 10:10	**Matrix**	Solid

EPA 8260B (Continued)

*Results Reported on Dry Weight Basis

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	500	12/18/2016 17:30	JCK	601036

CAS#	Parameter	Result	LOQ	Units
98-06-6	tert-Butylbenzene	ND	1.84	mg/kg
108-88-3	Toluene	ND	1.84	mg/kg
156-60-5	trans-1,2-Dichloroethene	ND	1.84	mg/kg
10061-02-6	trans-1,3-Dichloropropene	ND	1.84	mg/kg
110-57-6	trans-1,4-Dichloro-2-butene	ND	1.84	mg/kg
79-01-6	**Trichloroethene**	**3.39**	**1.84**	**mg/kg**
75-69-4	Trichlorofluoromethane	ND	1.84	mg/kg
76-13-1	Trichlorotrifluoroethane	ND	1.84	mg/kg
75-01-4	Vinyl chloride	ND	1.84	mg/kg
1330-20-7	Xylene (total)	ND	5.51	mg/kg

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	15.60	15.7	ug/Kg	101	62 - 127
1868-53-7	Dibromofluoromethane	15.60	17.3	ug/Kg	111	65 - 130
2037-26-5	Toluene d8	15.60	15.5	ug/Kg	99	71 - 132
17060-07-0	1,2-Dichloroethane-d4	15.60	17.5	ug/Kg	112	62 - 125

EPA 8260B

*Results Reported on Dry Weight Basis

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	5000	12/18/2016 14:56	BLY	601036

CAS#	Parameter	Result	LOQ	Units
127-18-4	**Tetrachloroethene**	**218**	**18.4**	**mg/kg**

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	156	146	ug/Kg	94	62 - 127
1868-53-7	Dibromofluoromethane	156	172	ug/Kg	110	65 - 130
2037-26-5	Toluene d8	156	157	ug/Kg	101	71 - 132
17060-07-0	1,2-Dichloroethane-d4	156	180	ug/Kg	116	62 - 125

Sample Results

WD-8 @ 5

Collect Date	12/13/2016 09:12	**GCAL ID**	21612160104
Receive Date	12/15/2016 10:10	**Matrix**	Solid

EPA 8260B

*Results Reported on Dry Weight Basis

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	5000	12/21/2016 15:00	IXE	601245

CAS#	Parameter	Result	LOQ	Units
630-20-6	1,1,1,2-Tetrachloroethane	ND	23.6	mg/kg
71-55-6	1,1,1-Trichloroethane	ND	23.6	mg/kg
79-34-5	1,1,2,2-Tetrachloroethane	ND	23.6	mg/kg
79-00-5	1,1,2-Trichloroethane	ND	23.6	mg/kg
75-34-3	1,1-Dichloroethane	ND	23.6	mg/kg
75-35-4	1,1-Dichloroethene	ND	23.6	mg/kg
563-58-6	1,1-Dichloropropene	ND	23.6	mg/kg
96-18-4	1,2,3-Trichloropropane	ND	23.6	mg/kg
120-82-1	1,2,4-Trichlorobenzene	ND	23.6	mg/kg
95-63-6	1,2,4-Trimethylbenzene	ND	23.6	mg/kg
96-12-8	1,2-Dibromo-3-chloropropane	ND	23.6	mg/kg
106-93-4	1,2-Dibromoethane	ND	23.6	mg/kg
95-50-1	1,2-Dichlorobenzene	ND	23.6	mg/kg
107-06-2	1,2-Dichloroethane	ND	23.6	mg/kg
540-59-0	1,2-Dichloroethene(Total)	ND	47.2	mg/kg
78-87-5	1,2-Dichloropropane	ND	23.6	mg/kg
108-67-8	1,3,5-Trimethylbenzene	ND	23.6	mg/kg
541-73-1	1,3-Dichlorobenzene	ND	23.6	mg/kg
142-28-9	1,3-Dichloropropane	ND	23.6	mg/kg
106-46-7	1,4-Dichlorobenzene	ND	23.6	mg/kg
594-20-7	2,2-Dichloropropane	ND	23.6	mg/kg
78-93-3	2-Butanone	ND	23.6	mg/kg
95-49-8	2-Chlorotoluene	ND	23.6	mg/kg
591-78-6	2-Hexanone	ND	23.6	mg/kg
106-43-4	4-Chlorotoluene	ND	23.6	mg/kg
99-87-6	4-Isopropyltoluene	ND	23.6	mg/kg
108-10-1	4-Methyl-2-pentanone	ND	23.6	mg/kg
67-64-1	Acetone	ND	118	mg/kg
71-43-2	Benzene	ND	23.6	mg/kg
108-86-1	Bromobenzene	ND	23.6	mg/kg
74-97-5	Bromochloromethane	ND	23.6	mg/kg
75-27-4	Bromodichloromethane	ND	23.6	mg/kg
75-25-2	Bromoform	ND	23.6	mg/kg
74-83-9	Bromomethane	ND	23.6	mg/kg
75-15-0	Carbon disulfide	ND	23.6	mg/kg
56-23-5	Carbon tetrachloride	ND	23.6	mg/kg
108-90-7	Chlorobenzene	ND	23.6	mg/kg
75-00-3	Chloroethane	ND	23.6	mg/kg
67-66-3	Chloroform	ND	23.6	mg/kg
74-87-3	Chloromethane	ND	23.6	mg/kg
156-59-2	cis-1,2-Dichloroethene	ND	23.6	mg/kg
10061-01-5	cis-1,3-Dichloropropene	ND	23.6	mg/kg
124-48-1	Dibromochloromethane	ND	23.6	mg/kg
74-95-3	Dibromomethane	ND	23.6	mg/kg
75-71-8	Dichlorodifluoromethane	ND	23.6	mg/kg
100-41-4	Ethylbenzene	ND	23.6	mg/kg
87-68-3	Hexachlorobutadiene	ND	23.6	mg/kg

Sample Results

WD-8 @ 5	**Collect Date**	12/13/2016 09:12	**GCAL ID**	21612160104
	Receive Date	12/15/2016 10:10	**Matrix**	Solid

EPA 8260B (Continued)

*Results Reported on Dry Weight Basis

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	5000	12/21/2016 15:00	IXE	601245

CAS#	Parameter	Result	LOQ	Units
98-82-8	Isopropylbenzene (Cumene)	ND	23.6	mg/kg
136777-61-2	m,p-Xylene	ND	47.2	mg/kg
75-09-2	Methylene chloride	ND	47.2	mg/kg
91-20-3	Naphthalene	ND	23.6	mg/kg
104-51-8	n-Butylbenzene	ND	23.6	mg/kg
103-65-1	n-Propylbenzene	ND	23.6	mg/kg
95-47-6	o-Xylene	ND	23.6	mg/kg
135-98-8	sec-Butylbenzene	ND	23.6	mg/kg
100-42-5	Styrene	ND	23.6	mg/kg
1634-04-4	tert-Butyl methyl ether (MTBE)	ND	23.6	mg/kg
98-06-6	tert-Butylbenzene	ND	23.6	mg/kg
108-88-3	Toluene	ND	23.6	mg/kg
156-60-5	trans-1,2-Dichloroethene	ND	23.6	mg/kg
10061-02-6	trans-1,3-Dichloropropene	ND	23.6	mg/kg
110-57-6	trans-1,4-Dichloro-2-butene	ND	23.6	mg/kg
79-01-6	Trichloroethene	ND	23.6	mg/kg
75-69-4	Trichlorofluoromethane	ND	23.6	mg/kg
76-13-1	Trichlorotrifluoroethane	ND	23.6	mg/kg
75-01-4	Vinyl chloride	ND	23.6	mg/kg
1330-20-7	Xylene (total)	ND	70.8	mg/kg

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	186	196	ug/Kg	105	62 - 127
1868-53-7	Dibromofluoromethane	186	194	ug/Kg	104	65 - 130
2037-26-5	Toluene d8	186	191	ug/Kg	103	71 - 132
17060-07-0	1,2-Dichloroethane-d4	186	184	ug/Kg	99	62 - 125

EPA 8260B

*Results Reported on Dry Weight Basis

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	50000	12/21/2016 14:37	IXE	601245

CAS#	Parameter	Result	LOQ	Units
127-18-4	**Tetrachloroethene**	**2880**	**236**	**mg/kg**

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	1860	1880	ug/Kg	101	62 - 127
1868-53-7	Dibromofluoromethane	1860	1980	ug/Kg	107	65 - 130
2037-26-5	Toluene d8	1860	1900	ug/Kg	102	71 - 132
17060-07-0	1,2-Dichloroethane-d4	1860	2040	ug/Kg	110	62 - 125

Sample Results

WD-11 @ 10	**Collect Date**	12/13/2016 08:54	**GCAL ID**	21612160105
	Receive Date	12/15/2016 10:10	**Matrix**	Solid

EPA 8260B *Results Reported on Dry Weight Basis

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	250	12/18/2016 18:14	JCK	601036

CAS#	Parameter	Result	LOQ	Units
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.880	mg/kg
71-55-6	1,1,1-Trichloroethane	ND	0.880	mg/kg
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.880	mg/kg
79-00-5	1,1,2-Trichloroethane	ND	0.880	mg/kg
75-34-3	1,1-Dichloroethane	ND	0.880	mg/kg
75-35-4	1,1-Dichloroethene	ND	0.880	mg/kg
563-58-6	1,1-Dichloropropene	ND	0.880	mg/kg
96-18-4	1,2,3-Trichloropropane	ND	0.880	mg/kg
120-82-1	1,2,4-Trichlorobenzene	ND	0.880	mg/kg
95-63-6	1,2,4-Trimethylbenzene	ND	0.880	mg/kg
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.880	mg/kg
106-93-4	1,2-Dibromoethane	ND	0.880	mg/kg
95-50-1	1,2-Dichlorobenzene	ND	0.880	mg/kg
107-06-2	1,2-Dichloroethane	ND	0.880	mg/kg
540-59-0	1,2-Dichloroethene(Total)	ND	1.76	mg/kg
78-87-5	1,2-Dichloropropane	ND	0.880	mg/kg
108-67-8	1,3,5-Trimethylbenzene	ND	0.880	mg/kg
541-73-1	1,3-Dichlorobenzene	ND	0.880	mg/kg
142-28-9	1,3-Dichloropropane	ND	0.880	mg/kg
106-46-7	1,4-Dichlorobenzene	ND	0.880	mg/kg
594-20-7	2,2-Dichloropropane	ND	0.880	mg/kg
78-93-3	2-Butanone	ND	0.880	mg/kg
95-49-8	2-Chlorotoluene	ND	0.880	mg/kg
591-78-6	2-Hexanone	ND	0.880	mg/kg
106-43-4	4-Chlorotoluene	ND	0.880	mg/kg
99-87-6	4-Isopropyltoluene	ND	0.880	mg/kg
108-10-1	4-Methyl-2-pentanone	ND	0.880	mg/kg
67-64-1	Acetone	ND	4.40	mg/kg
71-43-2	Benzene	ND	0.880	mg/kg
108-86-1	Bromobenzene	ND	0.880	mg/kg
74-97-5	Bromochloromethane	ND	0.880	mg/kg
75-27-4	Bromodichloromethane	ND	0.880	mg/kg
75-25-2	Bromoform	ND	0.880	mg/kg
74-83-9	Bromomethane	ND	0.880	mg/kg
75-15-0	Carbon disulfide	ND	0.880	mg/kg
56-23-5	Carbon tetrachloride	ND	0.880	mg/kg
108-90-7	Chlorobenzene	ND	0.880	mg/kg
75-00-3	Chloroethane	ND	0.880	mg/kg
67-66-3	Chloroform	ND	0.880	mg/kg
74-87-3	Chloromethane	ND	0.880	mg/kg
156-59-2	**cis-1,2-Dichloroethene**	**1.67**	**0.880**	**mg/kg**
10061-01-5	cis-1,3-Dichloropropene	ND	0.880	mg/kg
124-48-1	Dibromochloromethane	ND	0.880	mg/kg
74-95-3	Dibromomethane	ND	0.880	mg/kg
75-71-8	Dichlorodifluoromethane	ND	0.880	mg/kg
100-41-4	Ethylbenzene	ND	0.880	mg/kg
87-68-3	Hexachlorobutadiene	ND	0.880	mg/kg

Sample Results

WD-11 @ 10

Collect Date	12/13/2016 08:54	**GCAL ID**	21612160105
Receive Date	12/15/2016 10:10	**Matrix**	Solid

EPA 8260B (Continued)

*Results Reported on Dry Weight Basis

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	250	12/18/2016 18:14	JCK	601036

CAS#	Parameter	Result	LOQ	Units
98-82-8	Isopropylbenzene (Cumene)	ND	0.880	mg/kg
136777-61-2	m,p-Xylene	ND	1.76	mg/kg
75-09-2	Methylene chloride	ND	1.76	mg/kg
91-20-3	Naphthalene	ND	0.880	mg/kg
104-51-8	n-Butylbenzene	ND	0.880	mg/kg
103-65-1	n-Propylbenzene	ND	0.880	mg/kg
95-47-6	o-Xylene	ND	0.880	mg/kg
135-98-8	sec-Butylbenzene	ND	0.880	mg/kg
100-42-5	Styrene	ND	0.880	mg/kg
1634-04-4	tert-Butyl methyl ether (MTBE)	ND	0.880	mg/kg
98-06-6	tert-Butylbenzene	ND	0.880	mg/kg
108-88-3	Toluene	ND	0.880	mg/kg
156-60-5	trans-1,2-Dichloroethene	ND	0.880	mg/kg
10061-02-6	trans-1,3-Dichloropropene	ND	0.880	mg/kg
110-57-6	trans-1,4-Dichloro-2-butene	ND	0.880	mg/kg
79-01-6	**Trichloroethene**	**1.40**	**0.880**	**mg/kg**
75-69-4	Trichlorofluoromethane	ND	0.880	mg/kg
76-13-1	Trichlorotrifluoroethane	ND	0.880	mg/kg
75-01-4	Vinyl chloride	ND	0.880	mg/kg
1330-20-7	Xylene (total)	ND	2.64	mg/kg

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	7.44	7.28	ug/Kg	98	62 - 127
1868-53-7	Dibromofluoromethane	7.44	8.2	ug/Kg	110	65 - 130
2037-26-5	Toluene d8	7.44	7.38	ug/Kg	99	71 - 132
17060-07-0	1,2-Dichloroethane-d4	7.44	8.62	ug/Kg	116	62 - 125

EPA 8260B

*Results Reported on Dry Weight Basis

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	2500	12/18/2016 15:40	BLY	601036

CAS#	Parameter	Result	LOQ	Units
127-18-4	**Tetrachloroethene**	**140**	**8.80**	**mg/kg**

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	74.40	70.9	ug/Kg	95	62 - 127
1868-53-7	Dibromofluoromethane	74.40	81	ug/Kg	109	65 - 130
2037-26-5	Toluene d8	74.40	75.1	ug/Kg	101	71 - 132
17060-07-0	1,2-Dichloroethane-d4	74.40	80.6	ug/Kg	108	62 - 125

Sample Results

ADD-1 @ 6	**Collect Date**	12/13/2016 08:30	**GCAL ID**	21612160106
	Receive Date	12/15/2016 10:10	**Matrix**	Solid

EPA 8260B *Results Reported on Dry Weight Basis

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	100	12/18/2016 16:02	LBH	601036

CAS#	Parameter	Result	LOQ	Units
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.338	mg/kg
71-55-6	1,1,1-Trichloroethane	ND	0.338	mg/kg
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.338	mg/kg
79-00-5	1,1,2-Trichloroethane	ND	0.338	mg/kg
75-34-3	1,1-Dichloroethane	ND	0.338	mg/kg
75-35-4	1,1-Dichloroethene	ND	0.338	mg/kg
563-58-6	1,1-Dichloropropene	ND	0.338	mg/kg
96-18-4	1,2,3-Trichloropropane	ND	0.338	mg/kg
120-82-1	1,2,4-Trichlorobenzene	ND	0.338	mg/kg
95-63-6	1,2,4-Trimethylbenzene	ND	0.338	mg/kg
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.338	mg/kg
106-93-4	1,2-Dibromoethane	ND	0.338	mg/kg
95-50-1	1,2-Dichlorobenzene	ND	0.338	mg/kg
107-06-2	1,2-Dichloroethane	ND	0.338	mg/kg
540-59-0	**1,2-Dichloroethene(Total)**	**4.11**	**0.676**	**mg/kg**
78-87-5	1,2-Dichloropropane	ND	0.338	mg/kg
108-67-8	1,3,5-Trimethylbenzene	ND	0.338	mg/kg
541-73-1	1,3-Dichlorobenzene	ND	0.338	mg/kg
142-28-9	1,3-Dichloropropane	ND	0.338	mg/kg
106-46-7	1,4-Dichlorobenzene	ND	0.338	mg/kg
594-20-7	2,2-Dichloropropane	ND	0.338	mg/kg
78-93-3	2-Butanone	ND	0.338	mg/kg
95-49-8	2-Chlorotoluene	ND	0.338	mg/kg
591-78-6	2-Hexanone	ND	0.338	mg/kg
106-43-4	4-Chlorotoluene	ND	0.338	mg/kg
99-87-6	4-Isopropyltoluene	ND	0.338	mg/kg
108-10-1	4-Methyl-2-pentanone	ND	0.338	mg/kg
67-64-1	Acetone	ND	1.69	mg/kg
71-43-2	Benzene	ND	0.338	mg/kg
108-86-1	Bromobenzene	ND	0.338	mg/kg
74-97-5	Bromochloromethane	ND	0.338	mg/kg
75-27-4	Bromodichloromethane	ND	0.338	mg/kg
75-25-2	Bromoform	ND	0.338	mg/kg
74-83-9	Bromomethane	ND	0.338	mg/kg
75-15-0	Carbon disulfide	ND	0.338	mg/kg
56-23-5	Carbon tetrachloride	ND	0.338	mg/kg
108-90-7	Chlorobenzene	ND	0.338	mg/kg
75-00-3	Chloroethane	ND	0.338	mg/kg
67-66-3	Chloroform	ND	0.338	mg/kg
74-87-3	Chloromethane	ND	0.338	mg/kg
156-59-2	**cis-1,2-Dichloroethene**	**4.11**	**0.338**	**mg/kg**
10061-01-5	cis-1,3-Dichloropropene	ND	0.338	mg/kg
124-48-1	Dibromochloromethane	ND	0.338	mg/kg
74-95-3	Dibromomethane	ND	0.338	mg/kg
75-71-8	Dichlorodifluoromethane	ND	0.338	mg/kg
100-41-4	Ethylbenzene	ND	0.338	mg/kg
87-68-3	Hexachlorobutadiene	ND	0.338	mg/kg

Sample Results

ADD-1 @ 6

Collect Date	12/13/2016 08:30	**GCAL ID**	21612160106
Receive Date	12/15/2016 10:10	**Matrix**	Solid

EPA 8260B (Continued)

*Results Reported on Dry Weight Basis

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	100	12/18/2016 16:02	LBH	601036

CAS#	Parameter	Result	LOQ	Units
98-82-8	Isopropylbenzene (Cumene)	ND	0.338	mg/kg
136777-61-2	m,p-Xylene	ND	0.676	mg/kg
75-09-2	Methylene chloride	ND	0.676	mg/kg
91-20-3	Naphthalene	ND	0.338	mg/kg
104-51-8	n-Butylbenzene	ND	0.338	mg/kg
103-65-1	n-Propylbenzene	ND	0.338	mg/kg
95-47-6	o-Xylene	ND	0.338	mg/kg
135-98-8	sec-Butylbenzene	ND	0.338	mg/kg
100-42-5	Styrene	ND	0.338	mg/kg
1634-04-4	tert-Butyl methyl ether (MTBE)	ND	0.338	mg/kg
98-06-6	tert-Butylbenzene	ND	0.338	mg/kg
108-88-3	Toluene	ND	0.338	mg/kg
156-60-5	trans-1,2-Dichloroethene	ND	0.338	mg/kg
10061-02-6	trans-1,3-Dichloropropene	ND	0.338	mg/kg
110-57-6	trans-1,4-Dichloro-2-butene	ND	0.338	mg/kg
79-01-6	**Trichloroethene**	**1.10**	**0.338**	**mg/kg**
75-69-4	Trichlorofluoromethane	ND	0.338	mg/kg
76-13-1	Trichlorotrifluoroethane	ND	0.338	mg/kg
75-01-4	Vinyl chloride	ND	0.338	mg/kg
1330-20-7	Xylene (total)	ND	1.01	mg/kg

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	2.83	2.73	ug/Kg	97	62 - 127
1868-53-7	Dibromofluoromethane	2.83	3.15	ug/Kg	111	65 - 130
2037-26-5	Toluene d8	2.83	3.01	ug/Kg	106	71 - 132
17060-07-0	1,2-Dichloroethane-d4	2.83	3.33	ug/Kg	118	62 - 125

EPA 8260B

*Results Reported on Dry Weight Basis

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	1000	12/18/2016 18:59	JCK	601036

CAS#	Parameter	Result	LOQ	Units
127-18-4	**Tetrachloroethene**	**16.0**	**3.38**	**mg/kg**

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	28.30	26.4	ug/Kg	93	62 - 127
1868-53-7	Dibromofluoromethane	28.30	31.6	ug/Kg	112	65 - 130
2037-26-5	Toluene d8	28.30	28.1	ug/Kg	99	71 - 132
17060-07-0	1,2-Dichloroethane-d4	28.30	33.3	ug/Kg	118	62 - 125

Sample Results

ADD-1 @ 10	**Collect Date**	12/13/2016 08:38	**GCAL ID**	21612160107
	Receive Date	12/15/2016 10:10	**Matrix**	Solid

EPA 8260B *Results Reported on Dry Weight Basis

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	50	12/18/2016 16:24	LBH	601036

CAS#	Parameter	Result	LOQ	Units
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.206	mg/kg
71-55-6	1,1,1-Trichloroethane	ND	0.206	mg/kg
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.206	mg/kg
79-00-5	1,1,2-Trichloroethane	ND	0.206	mg/kg
75-34-3	1,1-Dichloroethane	ND	0.206	mg/kg
75-35-4	1,1-Dichloroethene	ND	0.206	mg/kg
563-58-6	1,1-Dichloropropene	ND	0.206	mg/kg
96-18-4	1,2,3-Trichloropropane	ND	0.206	mg/kg
120-82-1	1,2,4-Trichlorobenzene	ND	0.206	mg/kg
95-63-6	1,2,4-Trimethylbenzene	ND	0.206	mg/kg
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.206	mg/kg
106-93-4	1,2-Dibromoethane	ND	0.206	mg/kg
95-50-1	1,2-Dichlorobenzene	ND	0.206	mg/kg
107-06-2	1,2-Dichloroethane	ND	0.206	mg/kg
540-59-0	**1,2-Dichloroethene(Total)**	**0.661**	**0.411**	**mg/kg**
78-87-5	1,2-Dichloropropane	ND	0.206	mg/kg
108-67-8	1,3,5-Trimethylbenzene	ND	0.206	mg/kg
541-73-1	1,3-Dichlorobenzene	ND	0.206	mg/kg
142-28-9	1,3-Dichloropropane	ND	0.206	mg/kg
106-46-7	1,4-Dichlorobenzene	ND	0.206	mg/kg
594-20-7	2,2-Dichloropropane	ND	0.206	mg/kg
78-93-3	2-Butanone	ND	0.206	mg/kg
95-49-8	2-Chlorotoluene	ND	0.206	mg/kg
591-78-6	2-Hexanone	ND	0.206	mg/kg
106-43-4	4-Chlorotoluene	ND	0.206	mg/kg
99-87-6	4-Isopropyltoluene	ND	0.206	mg/kg
108-10-1	4-Methyl-2-pentanone	ND	0.206	mg/kg
67-64-1	Acetone	ND	1.03	mg/kg
71-43-2	Benzene	ND	0.206	mg/kg
108-86-1	Bromobenzene	ND	0.206	mg/kg
74-97-5	Bromochloromethane	ND	0.206	mg/kg
75-27-4	Bromodichloromethane	ND	0.206	mg/kg
75-25-2	Bromoform	ND	0.206	mg/kg
74-83-9	Bromomethane	ND	0.206	mg/kg
75-15-0	Carbon disulfide	ND	0.206	mg/kg
56-23-5	Carbon tetrachloride	ND	0.206	mg/kg
108-90-7	Chlorobenzene	ND	0.206	mg/kg
75-00-3	Chloroethane	ND	0.206	mg/kg
67-66-3	Chloroform	ND	0.206	mg/kg
74-87-3	Chloromethane	ND	0.206	mg/kg
156-59-2	**cis-1,2-Dichloroethene**	**0.661**	**0.206**	**mg/kg**
10061-01-5	cis-1,3-Dichloropropene	ND	0.206	mg/kg
124-48-1	Dibromochloromethane	ND	0.206	mg/kg
74-95-3	Dibromomethane	ND	0.206	mg/kg
75-71-8	Dichlorodifluoromethane	ND	0.206	mg/kg
100-41-4	Ethylbenzene	ND	0.206	mg/kg
87-68-3	Hexachlorobutadiene	ND	0.206	mg/kg

Sample Results

ADD-1 @ 10

Collect Date	12/13/2016 08:38	**GCAL ID**	21612160107
Receive Date	12/15/2016 10:10	**Matrix**	Solid

EPA 8260B (Continued)

*Results Reported on Dry Weight Basis

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	50	12/18/2016 16:24	LBH	601036

CAS#	Parameter	Result	LOQ	Units
98-82-8	Isopropylbenzene (Cumene)	ND	0.206	mg/kg
136777-61-2	m,p-Xylene	ND	0.411	mg/kg
75-09-2	Methylene chloride	ND	0.411	mg/kg
91-20-3	Naphthalene	ND	0.206	mg/kg
104-51-8	n-Butylbenzene	ND	0.206	mg/kg
103-65-1	n-Propylbenzene	ND	0.206	mg/kg
95-47-6	o-Xylene	ND	0.206	mg/kg
135-98-8	sec-Butylbenzene	ND	0.206	mg/kg
100-42-5	Styrene	ND	0.206	mg/kg
1634-04-4	tert-Butyl methyl ether (MTBE)	ND	0.206	mg/kg
98-06-6	tert-Butylbenzene	ND	0.206	mg/kg
108-88-3	Toluene	ND	0.206	mg/kg
156-60-5	trans-1,2-Dichloroethene	ND	0.206	mg/kg
10061-02-6	trans-1,3-Dichloropropene	ND	0.206	mg/kg
110-57-6	trans-1,4-Dichloro-2-butene	ND	0.206	mg/kg
79-01-6	**Trichloroethene**	**0.699**	**0.206**	**mg/kg**
75-69-4	Trichlorofluoromethane	ND	0.206	mg/kg
76-13-1	Trichlorotrifluoroethane	ND	0.206	mg/kg
75-01-4	Vinyl chloride	ND	0.206	mg/kg
1330-20-7	Xylene (total)	ND	0.617	mg/kg

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	1.79	1.73	ug/Kg	97	62 - 127
1868-53-7	Dibromofluoromethane	1.79	1.95	ug/Kg	109	65 - 130
2037-26-5	Toluene d8	1.79	1.61	ug/Kg	90	71 - 132
17060-07-0	1,2-Dichloroethane-d4	1.79	2.01	ug/Kg	112	62 - 125

EPA 8260B

*Results Reported on Dry Weight Basis

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	1000	12/18/2016 19:21	JCK	601036

CAS#	Parameter	Result	LOQ	Units
127-18-4	**Tetrachloroethene**	**53.3**	**4.11**	**mg/kg**

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	35.80	36.7	ug/Kg	103	62 - 127
1868-53-7	Dibromofluoromethane	35.80	40.3	ug/Kg	113	65 - 130
2037-26-5	Toluene d8	35.80	36.6	ug/Kg	102	71 - 132
17060-07-0	1,2-Dichloroethane-d4	35.80	40.1	ug/Kg	112	62 - 125

Sample Results

ADD-2 @ 5

Collect Date	12/13/2016 08:15	**GCAL ID**	21612160108
Receive Date	12/15/2016 10:10	**Matrix**	Solid

EPA 8260B

*Results Reported on Dry Weight Basis

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	200	12/18/2016 16:46	LBH	601036

CAS#	Parameter	Result	LOQ	Units
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.697	mg/kg
71-55-6	1,1,1-Trichloroethane	ND	0.697	mg/kg
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.697	mg/kg
79-00-5	1,1,2-Trichloroethane	ND	0.697	mg/kg
75-34-3	1,1-Dichloroethane	ND	0.697	mg/kg
75-35-4	1,1-Dichloroethene	ND	0.697	mg/kg
563-58-6	1,1-Dichloropropene	ND	0.697	mg/kg
96-18-4	1,2,3-Trichloropropane	ND	0.697	mg/kg
120-82-1	1,2,4-Trichlorobenzene	ND	0.697	mg/kg
95-63-6	1,2,4-Trimethylbenzene	ND	0.697	mg/kg
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.697	mg/kg
106-93-4	1,2-Dibromoethane	ND	0.697	mg/kg
95-50-1	1,2-Dichlorobenzene	ND	0.697	mg/kg
107-06-2	1,2-Dichloroethane	ND	0.697	mg/kg
540-59-0	**1,2-Dichloroethene(Total)**	**4.11**	**1.39**	**mg/kg**
78-87-5	1,2-Dichloropropane	ND	0.697	mg/kg
108-67-8	1,3,5-Trimethylbenzene	ND	0.697	mg/kg
541-73-1	1,3-Dichlorobenzene	ND	0.697	mg/kg
142-28-9	1,3-Dichloropropane	ND	0.697	mg/kg
106-46-7	1,4-Dichlorobenzene	ND	0.697	mg/kg
594-20-7	2,2-Dichloropropane	ND	0.697	mg/kg
78-93-3	2-Butanone	ND	0.697	mg/kg
95-49-8	2-Chlorotoluene	ND	0.697	mg/kg
591-78-6	2-Hexanone	ND	0.697	mg/kg
106-43-4	4-Chlorotoluene	ND	0.697	mg/kg
99-87-6	4-Isopropyltoluene	ND	0.697	mg/kg
108-10-1	4-Methyl-2-pentanone	ND	0.697	mg/kg
67-64-1	Acetone	ND	3.49	mg/kg
71-43-2	Benzene	ND	0.697	mg/kg
108-86-1	Bromobenzene	ND	0.697	mg/kg
74-97-5	Bromochloromethane	ND	0.697	mg/kg
75-27-4	Bromodichloromethane	ND	0.697	mg/kg
75-25-2	Bromoform	ND	0.697	mg/kg
74-83-9	Bromomethane	ND	0.697	mg/kg
75-15-0	Carbon disulfide	ND	0.697	mg/kg
56-23-5	Carbon tetrachloride	ND	0.697	mg/kg
108-90-7	Chlorobenzene	ND	0.697	mg/kg
75-00-3	Chloroethane	ND	0.697	mg/kg
67-66-3	Chloroform	ND	0.697	mg/kg
74-87-3	Chloromethane	ND	0.697	mg/kg
156-59-2	**cis-1,2-Dichloroethene**	**4.11**	**0.697**	**mg/kg**
10061-01-5	cis-1,3-Dichloropropene	ND	0.697	mg/kg
124-48-1	Dibromochloromethane	ND	0.697	mg/kg
74-95-3	Dibromomethane	ND	0.697	mg/kg
75-71-8	Dichlorodifluoromethane	ND	0.697	mg/kg
100-41-4	Ethylbenzene	ND	0.697	mg/kg
87-68-3	Hexachlorobutadiene	ND	0.697	mg/kg

Sample Results

ADD-2 @ 5

Collect Date	12/13/2016 08:15	**GCAL ID**	21612160108
Receive Date	12/15/2016 10:10	**Matrix**	Solid

EPA 8260B (Continued)

*Results Reported on Dry Weight Basis

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	200	12/18/2016 16:46	LBH	601036

CAS#	Parameter	Result	LOQ	Units
98-82-8	Isopropylbenzene (Cumene)	ND	0.697	mg/kg
136777-61-2	m,p-Xylene	ND	1.39	mg/kg
75-09-2	Methylene chloride	ND	1.39	mg/kg
91-20-3	Naphthalene	ND	0.697	mg/kg
104-51-8	n-Butylbenzene	ND	0.697	mg/kg
103-65-1	n-Propylbenzene	ND	0.697	mg/kg
95-47-6	o-Xylene	ND	0.697	mg/kg
135-98-8	sec-Butylbenzene	ND	0.697	mg/kg
100-42-5	Styrene	ND	0.697	mg/kg
1634-04-4	tert-Butyl methyl ether (MTBE)	ND	0.697	mg/kg
98-06-6	tert-Butylbenzene	ND	0.697	mg/kg
108-88-3	Toluene	ND	0.697	mg/kg
156-60-5	trans-1,2-Dichloroethene	ND	0.697	mg/kg
10061-02-6	trans-1,3-Dichloropropene	ND	0.697	mg/kg
110-57-6	trans-1,4-Dichloro-2-butene	ND	0.697	mg/kg
79-01-6	**Trichloroethene**	**2.18**	**0.697**	**mg/kg**
75-69-4	Trichlorofluoromethane	ND	0.697	mg/kg
76-13-1	Trichlorotrifluoroethane	ND	0.697	mg/kg
75-01-4	Vinyl chloride	ND	0.697	mg/kg
1330-20-7	Xylene (total)	ND	2.09	mg/kg

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	6.05	5.78	ug/Kg	96	62 - 127
1868-53-7	Dibromofluoromethane	6.05	6.64	ug/Kg	110	65 - 130
2037-26-5	Toluene d8	6.05	5.99	ug/Kg	99	71 - 132
17060-07-0	1,2-Dichloroethane-d4	6.05	7.38	ug/Kg	122	62 - 125

EPA 8260B

*Results Reported on Dry Weight Basis

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	2000	12/18/2016 19:43	JCK	601036

CAS#	Parameter	Result	LOQ	Units
127-18-4	**Tetrachloroethene**	**51.6**	**6.97**	**mg/kg**

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	60.50	57.8	ug/Kg	96	62 - 127
1868-53-7	Dibromofluoromethane	60.50	65.6	ug/Kg	109	65 - 130
2037-26-5	Toluene d8	60.50	61.4	ug/Kg	102	71 - 132
17060-07-0	1,2-Dichloroethane-d4	60.50	69.8	ug/Kg	115	62 - 125

GC/MS Volatiles QC Summary

Analytical Batch 601036	Client ID	MB601036		LCS601036				LCSD601036				
	GCAL ID	1639429		1639430				1639431				
	Sample Type	MB		LCS				LCSD				
	Prep Date	NA		NA				NA				
	Analysis Date	12/18/2016 13:50		12/18/2016 11:16				12/18/2016 11:38				
	Matrix	Solid		Solid				Solid				
EPA 8260B		Units Result	mg/kg LOQ	Spike Added	Result	%R	Control Limits%R	Spike Added	Result	%R	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	630-20-6	ND	0.250	2.50	2.35	94	77 - 122	2.50	2.40	96	2	30
1,1,1-Trichloroethane	71-55-6	ND	0.250	2.50	2.63	105	70 - 130	2.50	2.67	107	2	30
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.250	2.50	2.12	85	66 - 129	2.50	2.25	90	6	30
1,1,2-Trichloroethane	79-00-5	ND	0.250	2.50	2.12	85	74 - 120	2.50	2.21	88	4	30
1,1-Dichloroethane	75-34-3	ND	0.250	2.50	2.53	101	71 - 126	2.50	2.53	101	0	30
1,1-Dichloroethene	75-35-4	ND	0.250	2.50	2.53	101	68 - 129	2.50	2.54	102	0	20
1,1-Dichloropropene	563-58-6	ND	0.250	2.50	2.78	111	70 - 138	2.50	2.65	106	5	30
1,2,3-Trichloropropane	96-18-4	ND	0.250	2.50	2.07	83	63 - 132	2.50	2.36	94	13	30
1,2,4-Trichlorobenzene	120-82-1	ND	0.250	2.50	2.24	90	64 - 135	2.50	2.35	94	5	30
1,2,4-Trimethylbenzene	95-63-6	ND	0.250	2.50	2.64	106	75 - 130	2.50	2.72	109	3	30
1,2-Dibromo-3-chloropropane	96-12-8	ND	0.250	2.50	1.89	76	60 - 123	2.50	2.23	89	17	30
1,2-Dibromoethane	106-93-4	ND	0.250	2.50	2.33	93	74 - 122	2.50	2.35	94	1	30
1,2-Dichlorobenzene	95-50-1	ND	0.250	2.50	2.38	95	76 - 125	2.50	2.48	99	4	30
1,2-Dichloroethane	107-06-2	ND	0.250	2.50	2.73	109	68 - 126	2.50	2.77	111	1	30
1,2-Dichloroethene(Total)	540-59-0	ND	0.500	5.00	5.27	105	72 - 129	5.00	5.32	106	1	30
1,2-Dichloropropane	78-87-5	ND	0.250	2.50	2.42	97	72 - 129	2.50	2.39	96	1	30
1,3,5-Trimethylbenzene	108-67-8	ND	0.250	2.50	2.72	109	74 - 136	2.50	2.78	111	2	30
1,3-Dichlorobenzene	541-73-1	ND	0.250	2.50	2.47	99	77 - 127	2.50	2.48	99	0	30
1,3-Dichloropropane	142-28-9	ND	0.250	2.50	2.28	91	77 - 121	2.50	2.36	94	3	30
1,4-Dichlorobenzene	106-46-7	ND	0.250	2.50	2.32	93	74 - 123	2.50	2.41	96	4	30
2,2-Dichloropropane	594-20-7	ND	0.250	2.50	2.85	114	74 - 129	2.50	2.77	111	3	30
2-Butanone	78-93-3	ND	0.250	2.50	2.15	86	47 - 142	2.50	2.32	93	8	30
2-Chlorotoluene	95-49-8	ND	0.250	2.50	2.62	105	75 - 132	2.50	2.66	106	2	30
2-Hexanone	591-78-6	ND	0.250	2.50	2.14	86	47 - 137	2.50	2.31	92	8	30
4-Chlorotoluene	106-43-4	ND	0.250	2.50	2.68	107	74 - 133	2.50	2.73	109	2	30
4-Isopropyltoluene	99-87-6	ND	0.250	2.50	2.81	112	71 - 136	2.50	2.77	111	1	30
4-Methyl-2-pentanone	108-10-1	ND	0.250	2.50	2.17	87	52 - 136	2.50	2.42	97	11	30
Acetone	67-64-1	ND	1.25	2.50	2.50	100	38 - 152	2.50	2.66	106	6	30
Benzene	71-43-2	ND	0.250	2.50	2.49	100	73 - 128	2.50	2.53	101	2	20
Bromobenzene	108-86-1	ND	0.250	2.50	2.46	98	73 - 124	2.50	2.52	101	2	30
Bromochloromethane	74-97-5	ND	0.250	2.50	2.48	99	73 - 127	2.50	2.61	104	5	30
Bromodichloromethane	75-27-4	ND	0.250	2.50	2.58	103	74 - 126	2.50	2.61	104	1	30
Bromoform	75-25-2	ND	0.250	2.50	2.21	88	67 - 122	2.50	2.30	92	4	30
Bromomethane	74-83-9	ND	0.250	2.50	2.79	112	48 - 139	2.50	3.23	129	15	30
Carbon disulfide	75-15-0	ND	0.250	2.50	3.15	126	68 - 133	2.50	3.18	127	1	30
Carbon tetrachloride	56-23-5	ND	0.250	2.50	2.71	108	71 - 133	2.50	2.62	105	3	30
Chlorobenzene	108-90-7	ND	0.250	2.50	2.31	92	75 - 121	2.50	2.34	94	1	20
Chloroethane	75-00-3	ND	0.250	2.50	2.87	115	57 - 144	2.50	2.83	113	1	30
Chloroform	67-66-3	ND	0.250	2.50	2.59	104	74 - 124	2.50	2.52	101	3	30
Chloromethane	74-87-3	ND	0.250	2.50	2.79	112	61 - 130	2.50	2.87	115	3	30
cis-1,2-Dichloroethene	156-59-2	ND	0.250	2.50	2.69	108	72 - 130	2.50	2.67	107	1	30
cis-1,3-Dichloropropene	10061-01-5	ND	0.250	2.50	2.73	109	72 - 129	2.50	2.77	111	1	30
Dibromochloromethane	124-48-1	ND	0.250	2.50	2.35	94	74 - 122	2.50	2.42	97	3	30
Dibromomethane	74-95-3	ND	0.250	2.50	2.30	92	72 - 125	2.50	2.35	94	2	30
Dichlorodifluoromethane	75-71-8	ND	0.250	2.50	2.60	104	59 - 138	2.50	2.49	100	4	30
Ethylbenzene	100-41-4	ND	0.250	2.50	2.44	98	74 - 130	2.50	2.39	96	2	30
Hexachlorobutadiene	87-68-3	ND	0.250	2.50	2.43	97	71 - 140	2.50	2.47	99	2	30
Isopropylbenzene (Cumene)	98-82-8	ND	0.250	2.50	2.67	107	74 - 125	2.50	2.65	106	1	30
m,p-Xylene	136777-61-2	ND	0.500	5.00	5.21	104	72 - 128	5.00	5.11	102	2	30
Methylene chloride	75-09-2	ND	0.500	2.50	2.44	98	66 - 130	2.50	2.37	95	3	30
Naphthalene	91-20-3	ND	0.250	2.50	1.82	73	54 - 132	2.50	2.09	84	14	35
n-Butylbenzene	104-51-8	ND	0.250	2.50	2.61	104	68 - 144	2.50	2.69	108	3	30
n-Propylbenzene	103-65-1	ND	0.250	2.50	2.68	107	73 - 137	2.50	2.68	107	0	30
o-Xylene	95-47-6	ND	0.250	2.50	2.63	105	69 - 133	2.50	2.58	103	2	30
sec-Butylbenzene	135-98-8	ND	0.250	2.50	2.70	108	72 - 141	2.50	2.68	107	1	30
Styrene	100-42-5	ND	0.250	2.50	2.43	97	72 - 128	2.50	2.43	97	0	30
tert-Butyl methyl ether (MTBE)	1634-04-4	ND	0.250	2.50	2.90	116	69 - 126	2.50	3.11	124	7	30
tert-Butylbenzene	98-06-6	ND	0.250	2.50	2.69	108	72 - 136	2.50	2.66	106	1	30

GC/MS Volatiles QC Summary

Analytical Batch 601036	Client ID	MB601036		LCS601036				LCSD601036				
	GCAL ID	1639429		1639430				1639431				
	Sample Type	MB		LCS				LCSD				
	Prep Date	NA		NA				NA				
	Analysis Date	12/18/2016 13:50		12/18/2016 11:16				12/18/2016 11:38				
	Matrix	Solid		Solid				Solid				
EPA 8260B		Units Result	mg/kg LOQ	Spike Added	Result	%R	Control Limits%R	Spike Added	Result	%R	RPD	RPD Limit
Tetrachloroethene	127-18-4	ND	0.250	2.50	2.45	98	70 - 127	2.50	2.47	99	1	30
Toluene	108-88-3	ND	0.250	2.50	2.35	94	74 - 121	2.50	2.38	95	1	20
trans-1,2-Dichloroethene	156-60-5	ND	0.250	2.50	2.57	103	67 - 134	2.50	2.66	106	3	30
trans-1,3-Dichloropropene	10061-02-6	ND	0.250	2.50	2.61	104	72 - 126	2.50	2.80	112	7	30
trans-1,4-Dichloro-2-butene	110-57-6	ND	0.250	2.50	2.37	95	44 - 146	2.50	2.68	107	12	30
Trichloroethene	79-01-6	ND	0.250	2.50	2.44	98	78 - 127	2.50	2.49	100	2	20
Trichlorofluoromethane	75-69-4	ND	0.250	2.50	3.16	126	64 - 141	2.50	3.11	124	2	30
Trichlorotrifluoroethane	76-13-1	ND	0.250	2.50	3.02	121	66 - 139	2.50	2.94	118	3	30
Vinyl chloride	75-01-4	ND	0.250	2.50	2.75	110	67 - 131	2.50	2.62	105	5	30
Xylene (total)	1330-20-7	ND	0.750	7.50	7.84	105	71 - 129	7.50	7.69	103	2	30
Surrogate												
1,2-Dichloroethane-d4	17060-07-0	2.88	115	2.5	2.72	109	62 - 125	2.5	2.78	111	NA	NA
4-Bromofluorobenzene	460-00-4	2.33	93	2.5	2.51	100	62 - 127	2.5	2.46	98	NA	NA
Dibromofluoromethane	1868-53-7	2.65	106	2.5	2.63	105	65 - 130	2.5	2.58	103	NA	NA
Toluene d8	2037-26-5	2.44	98	2.5	2.42	97	71 - 132	2.5	2.44	98	NA	NA

Analytical Batch 601181	Client ID	MB601181		LCS601181				LCSD601181				
	GCAL ID	1639932		1639933				1639934				
	Sample Type	MB		LCS				LCSD				
	Prep Date	NA		NA				NA				
	Analysis Date	12/20/2016 13:52		12/20/2016 12:19				12/20/2016 12:42				
	Matrix	Solid		Solid				Solid				
EPA 8260B		Units Result	mg/kg LOQ	Spike Added	Result	%R	Control Limits%R	Spike Added	Result	%R	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	630-20-6	ND	0.00500	0.050	0.051	102	77 - 122	0.050	0.051	102	0	30
1,1,1-Trichloroethane	71-55-6	ND	0.00500	0.050	0.051	103	70 - 130	0.050	0.047	94	9	30
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.00500	0.050	0.050	100	66 - 129	0.050	0.049	98	2	30
1,1,2-Trichloroethane	79-00-5	ND	0.00500	0.050	0.053	105	74 - 120	0.050	0.054	107	3	30
1,1-Dichloroethane	75-34-3	ND	0.00500	0.050	0.049	98	71 - 126	0.050	0.044	89	10	30
1,1-Dichloroethene	75-35-4	ND	0.00500	0.050	0.061	121	68 - 129	0.050	0.065	**131***	7	20
1,1-Dichloropropene	563-58-6	ND	0.00500	0.050	0.056	112	70 - 138	0.050	0.048	96	15	30
1,2,3-Trichloropropane	96-18-4	ND	0.00500	0.050	0.047	94	63 - 132	0.050	0.046	92	2	30
1,2,4-Trichlorobenzene	120-82-1	ND	0.00500	0.050	0.055	109	64 - 135	0.050	0.057	114	4	30
1,2,4-Trimethylbenzene	95-63-6	ND	0.00500	0.050	0.053	107	75 - 130	0.050	0.052	104	2	30
1,2-Dibromo-3-chloropropane	96-12-8	ND	0.00500	0.050	0.055	110	60 - 123	0.050	0.053	106	4	30
1,2-Dibromoethane	106-93-4	ND	0.00500	0.050	0.052	103	74 - 122	0.050	0.056	113	8	30
1,2-Dichlorobenzene	95-50-1	ND	0.00500	0.050	0.052	105	76 - 125	0.050	0.053	106	1	30
1,2-Dichloroethane	107-06-2	ND	0.00500	0.050	0.043	85	68 - 126	0.050	0.042	84	1	30
1,2-Dichloroethene(Total)	540-59-0	ND	0.010	0.100	0.099	99	72 - 129	0.100	0.102	102	3	30
1,2-Dichloropropane	78-87-5	ND	0.00500	0.050	0.045	89	72 - 129	0.050	0.043	86	4	30
1,3,5-Trimethylbenzene	108-67-8	ND	0.00500	0.050	0.053	105	74 - 136	0.050	0.051	101	3	30
1,3-Dichlorobenzene	541-73-1	ND	0.00500	0.050	0.053	105	77 - 127	0.050	0.053	106	1	30
1,3-Dichloropropane	142-28-9	ND	0.00500	0.050	0.048	97	77 - 121	0.050	0.055	111	13	30
1,4-Dichlorobenzene	106-46-7	ND	0.00500	0.050	0.053	106	74 - 123	0.050	0.052	105	2	30
2,2-Dichloropropane	594-20-7	ND	0.00500	0.050	0.053	106	74 - 129	0.050	0.049	98	8	30
2-Butanone	78-93-3	ND	0.00500	0.050	0.051	102	47 - 142	0.050	0.042	85	19	30
2-Chlorotoluene	95-49-8	ND	0.00500	0.050	0.051	101	75 - 132	0.050	0.049	98	3	30
2-Hexanone	591-78-6	ND	0.00500	0.050	0.052	104	47 - 137	0.050	0.055	109	6	30
4-Chlorotoluene	106-43-4	ND	0.00500	0.050	0.051	103	74 - 133	0.050	0.052	103	1	30
4-Isopropyltoluene	99-87-6	ND	0.00500	0.050	0.055	109	71 - 136	0.050	0.053	106	3	30
4-Methyl-2-pentanone	108-10-1	ND	0.00500	0.050	0.053	106	52 - 136	0.050	0.046	91	14	30
Acetone	67-64-1	ND	0.025	0.050	0.039	77	38 - 152	0.050	0.044	88	13	30
Benzene	71-43-2	ND	0.00500	0.050	0.052	103	73 - 128	0.050	0.049	99	5	20
Bromobenzene	108-86-1	ND	0.00500	0.050	0.049	98	73 - 124	0.050	0.047	95	4	30
Bromochloromethane	74-97-5	ND	0.00500	0.050	0.053	106	73 - 127	0.050	0.052	104	2	30
Bromodichloromethane	75-27-4	ND	0.00500	0.050	0.048	95	74 - 126	0.050	0.046	91	4	30
Bromoform	75-25-2	ND	0.00500	0.050	0.051	102	67 - 122	0.050	0.053	106	4	30

GC/MS Volatiles QC Summary

Analytical Batch 601181	Client ID	MB601181		LCS601181				LCSD601181				
	GCAL ID	1639932		1639933				1639934				
	Sample Type	MB		LCS				LCSD				
	Prep Date	NA		NA				NA				
	Analysis Date	12/20/2016 13:52		12/20/2016 12:19				12/20/2016 12:42				
	Matrix	Solid		Solid				Solid				
EPA 8260B		Units Result	mg/kg LOQ	Spike Added	Result	%R	Control Limits%R	Spike Added	Result	%R	RPD	RPD Limit
Bromomethane	74-83-9	ND	0.00500	0.050	0.063	126	48 - 139	0.050	0.063	126	0	30
Carbon disulfide	75-15-0	ND	0.00500	0.050	0.058	116	68 - 133	0.050	0.064	128	10	30
Carbon tetrachloride	56-23-5	ND	0.00500	0.050	0.050	100	71 - 133	0.050	0.044	89	12	30
Chlorobenzene	108-90-7	ND	0.00500	0.050	0.054	107	75 - 121	0.050	0.052	105	3	20
Chloroethane	75-00-3	ND	0.00500	0.050	0.055	109	57 - 144	0.050	0.053	106	3	30
Chloroform	67-66-3	ND	0.00500	0.050	0.051	102	74 - 124	0.050	0.046	91	10	30
Chloromethane	74-87-3	ND	0.00500	0.050	0.053	106	61 - 130	0.050	0.048	97	10	30
cis-1,2-Dichloroethene	156-59-2	ND	0.00500	0.050	0.050	100	72 - 130	0.050	0.049	97	2	30
cis-1,3-Dichloropropene	10061-01-5	ND	0.00500	0.050	0.053	107	72 - 129	0.050	0.052	104	3	30
Dibromochloromethane	124-48-1	ND	0.00500	0.050	0.051	101	74 - 122	0.050	0.054	108	7	30
Dibromomethane	74-95-3	ND	0.00500	0.050	0.050	100	72 - 125	0.050	0.049	98	2	30
Dichlorodifluoromethane	75-71-8	ND	0.00500	0.050	0.049	97	59 - 138	0.050	0.047	94	4	30
Ethylbenzene	100-41-4	ND	0.00500	0.050	0.053	105	74 - 130	0.050	0.052	104	1	30
Hexachlorobutadiene	87-68-3	ND	0.00500	0.050	0.055	110	71 - 140	0.050	0.055	111	0	30
Isopropylbenzene (Cumene)	98-82-8	ND	0.00500	0.050	0.058	116	74 - 125	0.050	0.056	112	3	30
m,p-Xylene	136777-61-2	ND	0.010	0.100	0.110	110	72 - 128	0.100	0.108	108	2	30
Methylene chloride	75-09-2	ND	0.010	0.050	0.043	86	66 - 130	0.050	0.051	102	17	30
Naphthalene	91-20-3	ND	0.00500	0.050	0.054	107	54 - 132	0.050	0.059	117	9	35
n-Butylbenzene	104-51-8	ND	0.00500	0.050	0.056	112	68 - 144	0.050	0.054	108	4	30
n-Propylbenzene	103-65-1	ND	0.00500	0.050	0.051	103	73 - 137	0.050	0.050	100	3	30
o-Xylene	95-47-6	ND	0.00500	0.050	0.057	113	69 - 133	0.050	0.056	112	1	30
sec-Butylbenzene	135-98-8	ND	0.00500	0.050	0.055	109	72 - 141	0.050	0.053	106	3	30
Styrene	100-42-5	ND	0.00500	0.050	0.059	117	72 - 128	0.050	0.058	116	1	30
tert-Butyl methyl ether (MTBE)	1634-04-4	ND	0.00500	0.050	0.044	87	69 - 126	0.050	0.046	92	5	30
tert-Butylbenzene	98-06-6	ND	0.00500	0.050	0.051	102	72 - 136	0.050	0.050	100	2	30
Tetrachloroethene	127-18-4	ND	0.00500	0.050	0.060	120	70 - 127	0.050	0.055	110	8	30
Toluene	108-88-3	ND	0.00500	0.050	0.057	113	74 - 121	0.050	0.050	100	13	20
trans-1,2-Dichloroethene	156-60-5	ND	0.00500	0.050	0.050	99	67 - 134	0.050	0.053	107	7	30
trans-1,3-Dichloropropene	10061-02-6	ND	0.00500	0.050	0.057	114	72 - 126	0.050	0.050	99	13	30
trans-1,4-Dichloro-2-butene	110-57-6	ND	0.00500	0.050	0.045	89	44 - 146	0.050	0.043	86	3	30
Trichloroethene	79-01-6	ND	0.00500	0.050	0.052	105	78 - 127	0.050	0.051	102	3	20
Trichlorofluoromethane	75-69-4	ND	0.00500	0.050	0.056	111	64 - 141	0.050	0.054	108	3	30
Trichlorotrifluoroethane	76-13-1	ND	0.00500	0.050	0.059	117	66 - 139	0.050	0.061	123	4	30
Vinyl chloride	75-01-4	ND	0.00500	0.050	0.058	116	67 - 131	0.050	0.052	103	11	30
Xylene (total)	1330-20-7	ND	0.015	0.150	0.166	111	71 - 129	0.150	0.164	109	1	30
Surrogate												
1,2-Dichloroethane-d4	17060-07-0	.0473	95	.05	.046	92	62 - 125	.05	.0447	89	NA	NA
4-Bromofluorobenzene	460-00-4	.0538	108	.05	.0546	109	62 - 127	.05	.0529	106	NA	NA
Dibromofluoromethane	1868-53-7	.0516	103	.05	.0522	104	65 - 130	.05	.0484	97	NA	NA
Toluene d8	2037-26-5	.0584	117	.05	.0535	107	71 - 132	.05	.0502	100	NA	NA

Analytical Batch 601245	Client ID	MB601245		LCS601245				LCSD601245				
	GCAL ID	1640181		1640182				1640183				
	Sample Type	MB		LCS				LCSD				
	Prep Date	NA		NA				NA				
	Analysis Date	12/21/2016 11:51		12/21/2016 08:36				12/21/2016 10:20				
	Matrix	Solid		Solid				Solid				
EPA 8260B		Units Result	mg/kg LOQ	Spike Added	Result	%R	Control Limits%R	Spike Added	Result	%R	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	630-20-6	ND	0.250	2.50	2.37	95	77 - 122	2.50	2.44	98	3	30
1,1,1-Trichloroethane	71-55-6	ND	0.250	2.50	2.47	99	70 - 130	2.50	2.53	101	2	30
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.250	2.50	2.35	94	66 - 129	2.50	2.52	101	7	30
1,1,2-Trichloroethane	79-00-5	ND	0.250	2.50	2.30	92	74 - 120	2.50	2.47	99	7	30
1,1-Dichloroethane	75-34-3	ND	0.250	2.50	2.45	98	71 - 126	2.50	2.54	102	4	30
1,1-Dichloroethene	75-35-4	ND	0.250	2.50	2.58	103	68 - 129	2.50	2.71	108	5	20
1,1-Dichloropropene	563-58-6	ND	0.250	2.50	2.59	104	70 - 138	2.50	2.67	107	3	30
1,2,3-Trichloropropane	96-18-4	ND	0.250	2.50	2.16	86	63 - 132	2.50	2.35	94	8	30

GC/MS Volatiles QC Summary

Analytical Batch 601245	Client ID	MB601245		LCS601245				LCSD601245				
	GCAL ID	1640181		1640182				1640183				
	Sample Type	MB		LCS				LCSD				
	Prep Date	NA		NA				NA				
	Analysis Date	12/21/2016 11:51		12/21/2016 08:36				12/21/2016 10:20				
	Matrix	Solid		Solid				Solid				
EPA 8260B		Units Result	mg/kg LOQ	Spike Added	Result	%R	Control Limits%R	Spike Added	Result	%R	RPD	RPD Limit
1,2,4-Trichlorobenzene	120-82-1	ND	0.250	2.50	2.09	84	64 - 135	2.50	2.08	83	1	30
1,2,4-Trimethylbenzene	95-63-6	ND	0.250	2.50	2.30	92	75 - 130	2.50	2.35	94	2	30
1,2-Dibromo-3-chloropropane	96-12-8	ND	0.250	2.50	2.34	94	60 - 123	2.50	2.59	104	10	30
1,2-Dibromoethane	106-93-4	ND	0.250	2.50	2.56	102	74 - 122	2.50	2.73	109	6	30
1,2-Dichlorobenzene	95-50-1	ND	0.250	2.50	2.19	88	76 - 125	2.50	2.28	91	4	30
1,2-Dichloroethane	107-06-2	ND	0.250	2.50	2.51	100	68 - 126	2.50	2.70	108	7	30
1,2-Dichloroethene(Total)	540-59-0	ND	0.500	5.00	5.13	103	72 - 129	5.00	5.27	105	3	30
1,2-Dichloropropane	78-87-5	ND	0.250	2.50	2.43	97	72 - 129	2.50	2.52	101	4	30
1,3,5-Trimethylbenzene	108-67-8	ND	0.250	2.50	2.15	86	74 - 136	2.50	2.18	87	1	30
1,3-Dichlorobenzene	541-73-1	ND	0.250	2.50	2.20	88	77 - 127	2.50	2.29	92	4	30
1,3-Dichloropropane	142-28-9	ND	0.250	2.50	2.36	94	77 - 121	2.50	2.54	102	7	30
1,4-Dichlorobenzene	106-46-7	ND	0.250	2.50	2.13	85	74 - 123	2.50	2.20	88	3	30
2,2-Dichloropropane	594-20-7	ND	0.250	2.50	2.55	102	74 - 129	2.50	2.58	103	1	30
2-Butanone	78-93-3	ND	0.250	2.50	2.51	100	47 - 142	2.50	2.70	108	7	30
2-Chlorotoluene	95-49-8	ND	0.250	2.50	2.04	82	75 - 132	2.50	2.08	83	2	30
2-Hexanone	591-78-6	ND	0.250	2.50	2.65	106	47 - 137	2.50	3.07	123	15	30
4-Chlorotoluene	106-43-4	ND	0.250	2.50	2.20	88	74 - 133	2.50	2.24	90	2	30
4-Isopropyltoluene	99-87-6	ND	0.250	2.50	2.22	89	71 - 136	2.50	2.22	89	0	30
4-Methyl-2-pentanone	108-10-1	ND	0.250	2.50	2.49	100	52 - 136	2.50	2.83	113	13	30
Acetone	67-64-1	ND	1.25	2.50	2.22	89	38 - 152	2.50	2.58	103	15	30
Benzene	71-43-2	ND	0.250	2.50	2.45	98	73 - 128	2.50	2.55	102	4	20
Bromobenzene	108-86-1	ND	0.250	2.50	2.08	83	73 - 124	2.50	2.16	86	4	30
Bromochloromethane	74-97-5	ND	0.250	2.50	2.76	110	73 - 127	2.50	2.87	115	4	30
Bromodichloromethane	75-27-4	ND	0.250	2.50	2.50	100	74 - 126	2.50	2.59	104	4	30
Bromoform	75-25-2	ND	0.250	2.50	2.37	95	67 - 122	2.50	2.55	102	7	30
Bromomethane	74-83-9	ND	0.250	2.50	3.04	122	48 - 139	2.50	3.31	132	9	30
Carbon disulfide	75-15-0	ND	0.250	2.50	2.54	102	68 - 133	2.50	2.56	102	1	30
Carbon tetrachloride	56-23-5	ND	0.250	2.50	2.67	107	71 - 133	2.50	2.80	112	5	30
Chlorobenzene	108-90-7	ND	0.250	2.50	2.42	97	75 - 121	2.50	2.49	100	3	20
Chloroethane	75-00-3	ND	0.250	2.50	2.70	108	57 - 144	2.50	2.71	108	0	30
Chloroform	67-66-3	ND	0.250	2.50	2.29	92	74 - 124	2.50	2.36	94	3	30
Chloromethane	74-87-3	ND	0.250	2.50	2.69	108	61 - 130	2.50	2.67	107	1	30
cis-1,2-Dichloroethene	156-59-2	ND	0.250	2.50	2.53	101	72 - 130	2.50	2.64	106	4	30
cis-1,3-Dichloropropene	10061-01-5	ND	0.250	2.50	2.41	96	72 - 129	2.50	2.52	101	4	30
Dibromochloromethane	124-48-1	ND	0.250	2.50	2.45	98	74 - 122	2.50	2.62	105	7	30
Dibromomethane	74-95-3	ND	0.250	2.50	2.57	103	72 - 125	2.50	2.75	110	7	30
Dichlorodifluoromethane	75-71-8	ND	0.250	2.50	2.36	94	59 - 138	2.50	2.40	96	2	30
Ethylbenzene	100-41-4	ND	0.250	2.50	2.28	91	74 - 130	2.50	2.31	92	1	30
Hexachlorobutadiene	87-68-3	ND	0.250	2.50	2.12	85	71 - 140	2.50	2.04	82	4	30
Isopropylbenzene (Cumene)	98-82-8	ND	0.250	2.50	2.43	97	74 - 125	2.50	2.46	98	1	30
m,p-Xylene	136777-61-2	ND	0.500	5.00	4.93	99	72 - 128	5.00	5.05	101	2	30
Methylene chloride	75-09-2	ND	0.500	2.50	2.60	104	66 - 130	2.50	2.70	108	4	30
Naphthalene	91-20-3	ND	0.250	2.50	2.13	85	54 - 132	2.50	2.25	90	5	35
n-Butylbenzene	104-51-8	ND	0.250	2.50	2.23	89	68 - 144	2.50	2.18	87	2	30
n-Propylbenzene	103-65-1	ND	0.250	2.50	2.02	81	73 - 137	2.50	2.02	81	0	30
o-Xylene	95-47-6	ND	0.250	2.50	2.57	103	69 - 133	2.50	2.62	105	2	30
sec-Butylbenzene	135-98-8	ND	0.250	2.50	2.11	84	72 - 141	2.50	2.07	83	2	30
Styrene	100-42-5	ND	0.250	2.50	2.63	105	72 - 128	2.50	2.70	108	3	30
tert-Butyl methyl ether (MTBE)	1634-04-4	ND	0.250	2.50	2.61	104	69 - 126	2.50	2.77	111	6	30
tert-Butylbenzene	98-06-6	ND	0.250	2.50	1.96	78	72 - 136	2.50	1.96	78	0	30
Tetrachloroethene	127-18-4	ND	0.250	2.50	2.38	95	70 - 127	2.50	2.39	96	0	30
Toluene	108-88-3	ND	0.250	2.50	2.24	90	74 - 121	2.50	2.31	92	3	20
trans-1,2-Dichloroethene	156-60-5	ND	0.250	2.50	2.59	104	67 - 134	2.50	2.63	105	2	30
trans-1,3-Dichloropropene	10061-02-6	ND	0.250	2.50	2.36	94	72 - 126	2.50	2.53	101	7	30
trans-1,4-Dichloro-2-butene	110-57-6	ND	0.250	2.50	2.67	107	44 - 146	2.50	3.11	124	15	30
Trichloroethene	79-01-6	ND	0.250	2.50	2.39	96	78 - 127	2.50	2.53	101	6	20
Trichlorofluoromethane	75-69-4	ND	0.250	2.50	2.75	110	64 - 141	2.50	2.62	105	5	30
Trichlorotrifluoroethane	76-13-1	ND	0.250	2.50	2.64	106	66 - 139	2.50	2.64	106	0	30

GC/MS Volatiles QC Summary

Analytical Batch 601245	Client ID	MB601245		LCS601245				LCSD601245				
	GCAL ID	1640181		1640182				1640183				
	Sample Type	MB		LCS				LCSD				
	Prep Date	NA		NA				NA				
	Analysis Date	12/21/2016 11:51		12/21/2016 08:36				12/21/2016 10:20				
	Matrix	Solid		Solid				Solid				
EPA 8260B		Units Result	mg/kg LOQ	Spike Added	Result	%R	Control Limits%R	Spike Added	Result	%R	RPD	RPD Limit
Vinyl chloride	75-01-4	ND	0.250	2.50	2.46	98	67 - 131	2.50	2.57	103	4	30
Xylene (total)	1330-20-7	ND	0.750	7.50	7.50	100	71 - 129	7.50	7.68	102	2	30
Surrogate												
1,2-Dichloroethane-d4	17060-07-0	2.68	107	2.5	2.59	104	62 - 125	2.5	2.58	103	NA	NA
4-Bromofluorobenzene	460-00-4	2.6	104	2.5	2.64	106	62 - 127	2.5	2.65	106	NA	NA
Dibromofluoromethane	1868-53-7	2.57	103	2.5	2.53	101	65 - 130	2.5	2.53	101	NA	NA
Toluene d8	2037-26-5	2.55	102	2.5	2.4	96	71 - 132	2.5	2.39	96	NA	NA

GCAL ANALYTICAL LABORATORIES, LLC

7979 Innovation Park Dr., Baton Rouge, LA 70820-7402
Phone: 225.769.4900 • Fax: 225.767.5717 • www.gcal.com

CHAIN OF CUSTODY RECORD

Client ID: 4912 - Clearwater Environmental Resources
SDG: 216121601
PM: SAB3

Report to:
Client: Clearwater Env. Services
Address: 3870 Pitt Ind. Blvd
Duluth GA 30096
Contact: Jack Wintle
Phone: 678-491-4609
E-mail: jack.wintle@clearwaterenv.net

Bill to:
Client:
Address: Ste 340139
Contact: SAA
Phone:
E-mail:

P.O. Number:
Project Name/Number: RAYLOC

Sampled By: Perry Frix / Clearwater

GCAL use only:
Custody Seal
used ☐ yes ☐ no
intact ☐ yes ☐ no
Temperature °C 2.1 EA
1611PM

☐ Dissolved Analysis Requested
☐ Field filtered
☐ Lab filtered

Matrix[1]	Date	Time (2400)	Comp	Grab	Sample Description	No Containers	VOCs via 8260B	Preservative
S	12/13	0901		X	PD-2 @ 10'	4	X	1
		0907		X	WD-2 @ 10'		X	2
		0847		X	WD-4 @ 10'		X	3
		0912		X	WD-8 @ 5'		X	4
		0854		X	WD-11 @ 10'		X	5
		0830		X	ADD-1 @ 5'		X	6
		0838		X	ADD-1 @ 10'		X	7
		0815		X	ADD-2 @ 5'		X	8
↓	↓	0823		X	ADD-2 @ 10'	↓	X	9 * SAB 12/22/16

Air Bill No: 7779 4872 8398

Turn Around Time (Business Days): ☐ 24h* ☐ 48h* ☐ 3 days* ☐ 1 week* ☑ Standard (Per Contract/Quote)

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
[signature]	12/14/16	1618	Avon Anez	12/14/16	10:14
Avon Anez	12/14/16		FedEx	12/14/16	
FedEx	12-15-16	10:10	Document Courier	12-15-16	10:10

Note: *Removed per Jack Wintle SAB 12/22/16

By submitting these samples, you agree to GCAL's terms and conditions contained in our most recent schedule of services.

WHITE: CLIENT FINAL REPORT - CANARY: CLIENT

Matrix[1]: W = water, S = solid, L = liquid, T = tissue

*Requires prior approval, rush charges may apply.

We cannot accept verbal changes. Please email written changes to your PM.

SAMPLE RECEIVING CHECKLIST

216121601

SAMPLE DELIVERY GROUP 216121601	
Client PM SAB3 4912 - Clearwater Environmental Resources	**Transport Method** FEDEX
Profile Number 259985	**Received By** McCune, Dodie N.
Line Item(s) 2 - Soils	**Receive Date(s)** 12/15/16

CHECKLIST	YES	NO	NA
Samples received with proper thermal and chemical preservation?	☑	☐	☐
Radioactivity is <1600 cmp? If no, record cmp value in notes section.	☑	☐	☐
Custody seals present and intact?	☑	☐	☐
COC relinquished and complete (including sample IDs, collect dates/times, and sampler name)?	☑	☐	☐
Short holds or RUSH samples received?	☐	☑	☐
All containers received in good condition and within hold time?	☑	☐	☐
All sample labels and containers received match the chain of custody?	☑	☐	☐
Preservation checked at receipt? Exceptions: VOC, Coliform, TOC, Oil and Grease, DOC	☐	☐	☑
Preservative added to any containers?	☐	☑	☐
VOC water containers received with headspace < 6mm?	☐	☐	☑
Received filtered sample volume for dissolved analysis?	☐	☐	☑
Trip blank present in all coolers containing VOC waters?	☐	☐	☑
Samples collected in containers provided by GCAL?	☐	☑	☐

COOLERS

Airbill	Thermometer ID: E29	Temp(°C)
		2.1

DISCREPANCIES

None

LAB PRESERVATIONS

None

NOTES

Revision 1.5

Page 1 of 1

NELAP CERTIFICATE NUMBER: 01955
DOD ELAP CERTIFICATE NUMBER: L14-243

ANALYTICAL RESULTS

PERFORMED BY

GCAL, LLC
7979 Innovation Park Dr.
Baton Rouge, LA 70820

Report Date 03/17/2017

GCAL Report 217031414

Project Rayloc

Deliver To	***Additional Recipients***
Jack Wintle Clearwater Env. Resources Peachtree Industrial blvd Duluth, GA 30096 678-491-4601	NONE

Laboratory Endorsement

Sample analysis was performed in accordance with approved methodologies provided by the Environmental Protection Agency or other recognized agencies. The samples and their corresponding extracts will be maintained for a period of 30 days unless otherwise arranged. Following this retention period the samples will be disposed in accordance with GCAL's Standard Operating Procedures.

Common Abbreviations that may be Utilized in this Report

ND	Indicates the result was Not Detected at the specified reporting limit
NO	Indicates the sample did not ignite when preliminary test performed for EPA Method 1030
DO	Indicates the result was Diluted Out
MI	Indicates the result was subject to Matrix Interference
TNTC	Indicates the result was Too Numerous To Count
SUBC	Indicates the analysis was Sub-Contracted
FLD	Indicates the analysis was performed in the Field
DL	Detection Limit
DL	Diluted analysis – when appended to Client Sample ID
LOD	Limit of Detection
LOQ	Limit of Quantitation
RE	Re-analysis
CF	HPLC or GC Confirmation
00:01	Reported as a time equivalent to 12:00 AM

Reporting Flags that may be Utilized in this Report

J or I	Indicates the result is between the MDL and LOQ
J	DOD flag on analyte in the parent sample for MS/MSD outside acceptance criteria
U	Indicates the compound was analyzed for but not detected
B or V	Indicates the analyte was detected in the associated Method Blank
Q	Indicates a non-compliant QC Result (See Q Flag Application Report)
*****	Indicates a non-compliant or not applicable QC recovery or RPD – see narrative
E	The result is estimated because it exceeded the instrument calibration range
E	Metals - % diference for the serial dilution is > 10%
P	RPD between primary and confirmation result is greater than 40

Sample receipt at GCAL is documented through the attached chain of custody. In accordance with NELAC, this report shall be reproduced only in full and with the written permission of GCAL. The results contained within this report relate only to the samples reported. The documented results are presented within this report.

This report pertains only to the samples listed in the Report Sample Summary and should be retained as a permanent record thereof. The results contained within this report are intended for the use of the client. Any unauthorized use of the information contained in this report is prohibited.

I certify that this data package is in compliance with The NELAC Institute (TNI) Standard 2009 and terms and conditions of the contract and Statement of Work both technically and for completeness, for other than the conditions in the case narrative. Release of the data contained in this hardcopy data package and in the computer readable data submitted has been authorized by the Quality Assurance Manager or his/her designee, as verified by the following signature.

Estimated uncertainty of measurement is available upon request. This report is in compliance with the DOD QSM as specified in the contract if applicable.

Authorized Signature
GCAL Report 217031414

Certifications

Certification	Certification Number
DOD ELAP	L14-243
Alabama	01955
Arkansas	12-060-0
Colorado	01955
Delaware	01955
Florida	E87854
Georgia	01955
Hawaii	01955
Idaho	01955
Illinois	200048
Indiana	01955
Kansas	E-10354
Kentucky	95
Louisiana	01955
Maryland	01955
Massachusetts	01955
Michigan	01955
Mississippi	01955
Missouri	01955
Montana	N/A
Nebraska	01955
New Mexico	01955
North Carolina	618
North Dakota	R-195
Oklahoma	9403
South Carolina	73006001
South Dakota	01955
Tennessee	01955
Texas	T104704178
Vermont	01955
Virginia	460215
USDA Soil Permit	P330-10-00117

Case Narrative

Client: Clearwater Environmental Resources **Report:** 217031414

Gulf Coast Analytical Laboratories received and analyzed the sample(s) listed on the Report Sample Summary page of this report. Receipt of the sample(s) is documented by the attached chain of custody. This applies only to the sample(s) listed in this report. No sample integrity or quality control exceptions were identified unless noted below.

VOLATILES MASS SPECTROMETRY

In the EPA 8260B analysis, all samples except the trip blank had to be diluted to bracket the concentration of target analytes within the calibration range of the instrument. The dilutions are reflected in elevated detection limits.

Sample Summary

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21703141401	PD-2@10	Solid	03/09/2017 09:24	03/14/2017 09:55
21703141402	WD-2@10	Solid	03/09/2017 09:37	03/14/2017 09:55
21703141403	WD-4@10	Solid	03/09/2017 08:47	03/14/2017 09:55
21703141404	WD-8@5	Solid	03/09/2017 09:44	03/14/2017 09:55
21703141405	WD-11@10	Solid	03/09/2017 09:12	03/14/2017 09:55
21703141406	ADD-1@6	Solid	03/09/2017 08:58	03/14/2017 09:55
21703141407	ADD-1@10	Solid	03/09/2017 09:06	03/14/2017 09:55
21703141408	ADD-2@5	Solid	03/09/2017 08:30	03/14/2017 09:55
21703141409	ADD-2@10	Solid	03/09/2017 08:39	03/14/2017 09:55
21703141410	TRIP BLANK	Water	03/09/2017 00:01	03/14/2017 09:55

Summary of Compounds Detected

PD-2@10

Collect Date 03/09/2017 09:24 **GCAL ID** 21703141401
Receive Date 03/14/2017 09:55 **Matrix** Solid

EPA 8260B *Results Reported on Dry Weight Basis

CAS#	Parameter	Result	LOQ	Units
127-18-4	Tetrachloroethene	2.59	0.196	mg/kg

WD-2@10

Collect Date 03/09/2017 09:37 **GCAL ID** 21703141402
Receive Date 03/14/2017 09:55 **Matrix** Solid

EPA 8260B *Results Reported on Dry Weight Basis

CAS#	Parameter	Result	LOQ	Units
156-59-2	cis-1,2-Dichloroethene	0.263	0.197	mg/kg
127-18-4	Tetrachloroethene	5.30	0.197	mg/kg

WD-4@10

Collect Date 03/09/2017 08:47 **GCAL ID** 21703141403
Receive Date 03/14/2017 09:55 **Matrix** Solid

EPA 8260B *Results Reported on Dry Weight Basis

CAS#	Parameter	Result	LOQ	Units
127-18-4	Tetrachloroethene	487	43.7	mg/kg
79-01-6	Trichloroethene	33.2	4.37	mg/kg

WD-8@5

Collect Date 03/09/2017 09:44 **GCAL ID** 21703141404
Receive Date 03/14/2017 09:55 **Matrix** Solid

EPA 8260B *Results Reported on Dry Weight Basis

CAS#	Parameter	Result	LOQ	Units
127-18-4	Tetrachloroethene	526	72.4	mg/kg

Summary of Compounds Detected

WD-11@10

Collect Date 03/09/2017 09:12 **GCAL ID** 21703141405
Receive Date 03/14/2017 09:55 **Matrix** Solid

EPA 8260B *Results Reported on Dry Weight Basis

CAS#	Parameter	Result	LOQ	Units
156-59-2	cis-1,2-Dichloroethene	2.80	2.18	mg/kg
127-18-4	Tetrachloroethene	141	21.8	mg/kg
79-01-6	Trichloroethene	2.79	2.18	mg/kg

ADD-1@6

Collect Date 03/09/2017 08:58 **GCAL ID** 21703141406
Receive Date 03/14/2017 09:55 **Matrix** Solid

EPA 8260B *Results Reported on Dry Weight Basis

CAS#	Parameter	Result	LOQ	Units
540-59-0	1,2-Dichloroethene(Total)	5.14	0.423	mg/kg
156-59-2	cis-1,2-Dichloroethene	5.14	0.212	mg/kg
127-18-4	Tetrachloroethene	22.2	1.06	mg/kg
79-01-6	Trichloroethene	1.63	0.212	mg/kg

ADD-1@10

Collect Date 03/09/2017 09:06 **GCAL ID** 21703141407
Receive Date 03/14/2017 09:55 **Matrix** Solid

EPA 8260B *Results Reported on Dry Weight Basis

CAS#	Parameter	Result	LOQ	Units
540-59-0	1,2-Dichloroethene(Total)	2.34	0.861	mg/kg
156-59-2	cis-1,2-Dichloroethene	2.34	0.430	mg/kg
127-18-4	Tetrachloroethene	56.9	4.30	mg/kg
79-01-6	Trichloroethene	1.79	0.430	mg/kg

ADD-2@5

Collect Date 03/09/2017 08:30 **GCAL ID** 21703141408
Receive Date 03/14/2017 09:55 **Matrix** Solid

EPA 8260B *Results Reported on Dry Weight Basis

CAS#	Parameter	Result	LOQ	Units
540-59-0	1,2-Dichloroethene(Total)	4.22	0.432	mg/kg
156-59-2	cis-1,2-Dichloroethene	4.22	0.216	mg/kg
127-18-4	Tetrachloroethene	26.2	2.16	mg/kg
79-01-6	Trichloroethene	1.61	0.216	mg/kg

Summary of Compounds Detected

ADD-2@10				
	Collect Date	03/09/2017 08:39	**GCAL ID**	21703141409
	Receive Date	03/14/2017 09:55	**Matrix**	Solid

EPA 8260B *Results Reported on Dry Weight Basis

CAS#	Parameter	Result	LOQ	Units
540-59-0	1,2-Dichloroethene(Total)	7.10	0.402	mg/kg
156-59-2	cis-1,2-Dichloroethene	7.10	0.201	mg/kg
127-18-4	Tetrachloroethene	8.89	1.00	mg/kg
79-01-6	Trichloroethene	3.52	0.201	mg/kg

Sample Results

PD-2@10	**Collect Date**	03/09/2017 09:24	**GCAL ID**	21703141401
	Receive Date	03/14/2017 09:55	**Matrix**	Solid

EPA 8260B *Results Reported on Dry Weight Basis

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	50	03/15/2017 11:53	LBH	606324

CAS#	Parameter	Result	LOQ	Units
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.196	mg/kg
71-55-6	1,1,1-Trichloroethane	ND	0.196	mg/kg
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.196	mg/kg
79-00-5	1,1,2-Trichloroethane	ND	0.196	mg/kg
75-34-3	1,1-Dichloroethane	ND	0.196	mg/kg
75-35-4	1,1-Dichloroethene	ND	0.196	mg/kg
563-58-6	1,1-Dichloropropene	ND	0.196	mg/kg
96-18-4	1,2,3-Trichloropropane	ND	0.196	mg/kg
120-82-1	1,2,4-Trichlorobenzene	ND	0.196	mg/kg
95-63-6	1,2,4-Trimethylbenzene	ND	0.196	mg/kg
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.196	mg/kg
106-93-4	1,2-Dibromoethane	ND	0.196	mg/kg
95-50-1	1,2-Dichlorobenzene	ND	0.196	mg/kg
107-06-2	1,2-Dichloroethane	ND	0.196	mg/kg
540-59-0	1,2-Dichloroethene(Total)	ND	0.392	mg/kg
78-87-5	1,2-Dichloropropane	ND	0.196	mg/kg
108-67-8	1,3,5-Trimethylbenzene	ND	0.196	mg/kg
541-73-1	1,3-Dichlorobenzene	ND	0.196	mg/kg
142-28-9	1,3-Dichloropropane	ND	0.196	mg/kg
106-46-7	1,4-Dichlorobenzene	ND	0.196	mg/kg
594-20-7	2,2-Dichloropropane	ND	0.196	mg/kg
78-93-3	2-Butanone	ND	0.196	mg/kg
95-49-8	2-Chlorotoluene	ND	0.196	mg/kg
591-78-6	2-Hexanone	ND	0.196	mg/kg
106-43-4	4-Chlorotoluene	ND	0.196	mg/kg
99-87-6	4-Isopropyltoluene	ND	0.196	mg/kg
108-10-1	4-Methyl-2-pentanone	ND	0.196	mg/kg
67-64-1	Acetone	ND	0.980	mg/kg
71-43-2	Benzene	ND	0.196	mg/kg
108-86-1	Bromobenzene	ND	0.196	mg/kg
74-97-5	Bromochloromethane	ND	0.196	mg/kg
75-27-4	Bromodichloromethane	ND	0.196	mg/kg
75-25-2	Bromoform	ND	0.196	mg/kg
74-83-9	Bromomethane	ND	0.196	mg/kg
75-15-0	Carbon disulfide	ND	0.196	mg/kg
56-23-5	Carbon tetrachloride	ND	0.196	mg/kg
108-90-7	Chlorobenzene	ND	0.196	mg/kg
75-00-3	Chloroethane	ND	0.196	mg/kg
67-66-3	Chloroform	ND	0.196	mg/kg
74-87-3	Chloromethane	ND	0.196	mg/kg
156-59-2	cis-1,2-Dichloroethene	ND	0.196	mg/kg
10061-01-5	cis-1,3-Dichloropropene	ND	0.196	mg/kg
124-48-1	Dibromochloromethane	ND	0.196	mg/kg
74-95-3	Dibromomethane	ND	0.196	mg/kg
75-71-8	Dichlorodifluoromethane	ND	0.196	mg/kg
100-41-4	Ethylbenzene	ND	0.196	mg/kg
87-68-3	Hexachlorobutadiene	ND	0.196	mg/kg

Sample Results

PD-2@10

Collect Date	03/09/2017 09:24	**GCAL ID**	21703141401
Receive Date	03/14/2017 09:55	**Matrix**	Solid

EPA 8260B (Continued) *Results Reported on Dry Weight Basis

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	50	03/15/2017 11:53	LBH	606324

CAS#	Parameter	Result	LOQ	Units
98-82-8	Isopropylbenzene (Cumene)	ND	0.196	mg/kg
136777-61-2	m,p-Xylene	ND	0.392	mg/kg
75-09-2	Methylene chloride	ND	0.392	mg/kg
91-20-3	Naphthalene	ND	0.196	mg/kg
104-51-8	n-Butylbenzene	ND	0.196	mg/kg
103-65-1	n-Propylbenzene	ND	0.196	mg/kg
95-47-6	o-Xylene	ND	0.196	mg/kg
135-98-8	sec-Butylbenzene	ND	0.196	mg/kg
100-42-5	Styrene	ND	0.196	mg/kg
1634-04-4	tert-Butyl methyl ether (MTBE)	ND	0.196	mg/kg
98-06-6	tert-Butylbenzene	ND	0.196	mg/kg
127-18-4	**Tetrachloroethene**	**2.59**	**0.196**	**mg/kg**
108-88-3	Toluene	ND	0.196	mg/kg
156-60-5	trans-1,2-Dichloroethene	ND	0.196	mg/kg
10061-02-6	trans-1,3-Dichloropropene	ND	0.196	mg/kg
110-57-6	trans-1,4-Dichloro-2-butene	ND	0.196	mg/kg
79-01-6	Trichloroethene	ND	0.196	mg/kg
75-69-4	Trichlorofluoromethane	ND	0.196	mg/kg
76-13-1	Trichlorotrifluoroethane	ND	0.196	mg/kg
75-01-4	Vinyl chloride	ND	0.196	mg/kg
1330-20-7	Xylene (total)	ND	0.588	mg/kg

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	1.82	1.84	ug/Kg	101	62 - 127
1868-53-7	Dibromofluoromethane	1.82	1.75	ug/Kg	96	65 - 130
2037-26-5	Toluene d8	1.82	1.88	ug/Kg	103	71 - 132
17060-07-0	1,2-Dichloroethane-d4	1.82	1.84	ug/Kg	101	62 - 125

WD-2@10

Collect Date	03/09/2017 09:37	**GCAL ID**	21703141402
Receive Date	03/14/2017 09:55	**Matrix**	Solid

EPA 8260B *Results Reported on Dry Weight Basis

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	50	03/15/2017 12:16	LBH	606324

CAS#	Parameter	Result	LOQ	Units
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.197	mg/kg
71-55-6	1,1,1-Trichloroethane	ND	0.197	mg/kg
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.197	mg/kg
79-00-5	1,1,2-Trichloroethane	ND	0.197	mg/kg
75-34-3	1,1-Dichloroethane	ND	0.197	mg/kg

Sample Results

WD-2@10	**Collect Date**	03/09/2017 09:37	**GCAL ID**	21703141402
	Receive Date	03/14/2017 09:55	**Matrix**	Solid

EPA 8260B (Continued) *Results Reported on Dry Weight Basis

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	50	03/15/2017 12:16	LBH	606324

CAS#	Parameter	Result	LOQ	Units
75-35-4	1,1-Dichloroethene	ND	0.197	mg/kg
563-58-6	1,1-Dichloropropene	ND	0.197	mg/kg
96-18-4	1,2,3-Trichloropropane	ND	0.197	mg/kg
120-82-1	1,2,4-Trichlorobenzene	ND	0.197	mg/kg
95-63-6	1,2,4-Trimethylbenzene	ND	0.197	mg/kg
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.197	mg/kg
106-93-4	1,2-Dibromoethane	ND	0.197	mg/kg
95-50-1	1,2-Dichlorobenzene	ND	0.197	mg/kg
107-06-2	1,2-Dichloroethane	ND	0.197	mg/kg
540-59-0	1,2-Dichloroethene(Total)	ND	0.394	mg/kg
78-87-5	1,2-Dichloropropane	ND	0.197	mg/kg
108-67-8	1,3,5-Trimethylbenzene	ND	0.197	mg/kg
541-73-1	1,3-Dichlorobenzene	ND	0.197	mg/kg
142-28-9	1,3-Dichloropropane	ND	0.197	mg/kg
106-46-7	1,4-Dichlorobenzene	ND	0.197	mg/kg
594-20-7	2,2-Dichloropropane	ND	0.197	mg/kg
78-93-3	2-Butanone	ND	0.197	mg/kg
95-49-8	2-Chlorotoluene	ND	0.197	mg/kg
591-78-6	2-Hexanone	ND	0.197	mg/kg
106-43-4	4-Chlorotoluene	ND	0.197	mg/kg
99-87-6	4-Isopropyltoluene	ND	0.197	mg/kg
108-10-1	4-Methyl-2-pentanone	ND	0.197	mg/kg
67-64-1	Acetone	ND	0.984	mg/kg
71-43-2	Benzene	ND	0.197	mg/kg
108-86-1	Bromobenzene	ND	0.197	mg/kg
74-97-5	Bromochloromethane	ND	0.197	mg/kg
75-27-4	Bromodichloromethane	ND	0.197	mg/kg
75-25-2	Bromoform	ND	0.197	mg/kg
74-83-9	Bromomethane	ND	0.197	mg/kg
75-15-0	Carbon disulfide	ND	0.197	mg/kg
56-23-5	Carbon tetrachloride	ND	0.197	mg/kg
108-90-7	Chlorobenzene	ND	0.197	mg/kg
75-00-3	Chloroethane	ND	0.197	mg/kg
67-66-3	Chloroform	ND	0.197	mg/kg
74-87-3	Chloromethane	ND	0.197	mg/kg
156-59-2	**cis-1,2-Dichloroethene**	**0.263**	**0.197**	**mg/kg**
10061-01-5	cis-1,3-Dichloropropene	ND	0.197	mg/kg
124-48-1	Dibromochloromethane	ND	0.197	mg/kg
74-95-3	Dibromomethane	ND	0.197	mg/kg
75-71-8	Dichlorodifluoromethane	ND	0.197	mg/kg
100-41-4	Ethylbenzene	ND	0.197	mg/kg
87-68-3	Hexachlorobutadiene	ND	0.197	mg/kg
98-82-8	Isopropylbenzene (Cumene)	ND	0.197	mg/kg
136777-61-2	m,p-Xylene	ND	0.394	mg/kg
75-09-2	Methylene chloride	ND	0.394	mg/kg
91-20-3	Naphthalene	ND	0.197	mg/kg
104-51-8	n-Butylbenzene	ND	0.197	mg/kg

Sample Results

WD-2@10

Collect Date 03/09/2017 09:37 **GCAL ID** 21703141402
Receive Date 03/14/2017 09:55 **Matrix** Solid

EPA 8260B (Continued) *Results Reported on Dry Weight Basis

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	50	03/15/2017 12:16	LBH	606324

CAS#	Parameter	Result	LOQ	Units
103-65-1	n-Propylbenzene	ND	0.197	mg/kg
95-47-6	o-Xylene	ND	0.197	mg/kg
135-98-8	sec-Butylbenzene	ND	0.197	mg/kg
100-42-5	Styrene	ND	0.197	mg/kg
1634-04-4	tert-Butyl methyl ether (MTBE)	ND	0.197	mg/kg
98-06-6	tert-Butylbenzene	ND	0.197	mg/kg
127-18-4	**Tetrachloroethene**	**5.30**	**0.197**	**mg/kg**
108-88-3	Toluene	ND	0.197	mg/kg
156-60-5	trans-1,2-Dichloroethene	ND	0.197	mg/kg
10061-02-6	trans-1,3-Dichloropropene	ND	0.197	mg/kg
110-57-6	trans-1,4-Dichloro-2-butene	ND	0.197	mg/kg
79-01-6	Trichloroethene	ND	0.197	mg/kg
75-69-4	Trichlorofluoromethane	ND	0.197	mg/kg
76-13-1	Trichlorotrifluoroethane	ND	0.197	mg/kg
75-01-4	Vinyl chloride	ND	0.197	mg/kg
1330-20-7	Xylene (total)	ND	0.590	mg/kg

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	1.71	1.71	ug/Kg	100	62 - 127
1868-53-7	Dibromofluoromethane	1.71	1.67	ug/Kg	97	65 - 130
2037-26-5	Toluene d8	1.71	1.73	ug/Kg	101	71 - 132
17060-07-0	1,2-Dichloroethane-d4	1.71	1.74	ug/Kg	101	62 - 125

WD-4@10

Collect Date 03/09/2017 08:47 **GCAL ID** 21703141403
Receive Date 03/14/2017 09:55 **Matrix** Solid

EPA 8260B *Results Reported on Dry Weight Basis

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	1000	03/15/2017 17:18	LBH	606324

CAS#	Parameter	Result	LOQ	Units
630-20-6	1,1,1,2-Tetrachloroethane	ND	4.37	mg/kg
71-55-6	1,1,1-Trichloroethane	ND	4.37	mg/kg
79-34-5	1,1,2,2-Tetrachloroethane	ND	4.37	mg/kg
79-00-5	1,1,2-Trichloroethane	ND	4.37	mg/kg
75-34-3	1,1-Dichloroethane	ND	4.37	mg/kg
75-35-4	1,1-Dichloroethene	ND	4.37	mg/kg
563-58-6	1,1-Dichloropropene	ND	4.37	mg/kg
96-18-4	1,2,3-Trichloropropane	ND	4.37	mg/kg
120-82-1	1,2,4-Trichlorobenzene	ND	4.37	mg/kg
95-63-6	1,2,4-Trimethylbenzene	ND	4.37	mg/kg

Sample Results

WD-4@10	**Collect Date**	03/09/2017 08:47	**GCAL ID**	21703141403
	Receive Date	03/14/2017 09:55	**Matrix**	Solid

EPA 8260B (Continued) *Results Reported on Dry Weight Basis

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	1000	03/15/2017 17:18	LBH	606324

CAS#	Parameter	Result	LOQ	Units
96-12-8	1,2-Dibromo-3-chloropropane	ND	4.37	mg/kg
106-93-4	1,2-Dibromoethane	ND	4.37	mg/kg
95-50-1	1,2-Dichlorobenzene	ND	4.37	mg/kg
107-06-2	1,2-Dichloroethane	ND	4.37	mg/kg
540-59-0	1,2-Dichloroethene(Total)	ND	8.74	mg/kg
78-87-5	1,2-Dichloropropane	ND	4.37	mg/kg
108-67-8	1,3,5-Trimethylbenzene	ND	4.37	mg/kg
541-73-1	1,3-Dichlorobenzene	ND	4.37	mg/kg
142-28-9	1,3-Dichloropropane	ND	4.37	mg/kg
106-46-7	1,4-Dichlorobenzene	ND	4.37	mg/kg
594-20-7	2,2-Dichloropropane	ND	4.37	mg/kg
78-93-3	2-Butanone	ND	4.37	mg/kg
95-49-8	2-Chlorotoluene	ND	4.37	mg/kg
591-78-6	2-Hexanone	ND	4.37	mg/kg
106-43-4	4-Chlorotoluene	ND	4.37	mg/kg
99-87-6	4-Isopropyltoluene	ND	4.37	mg/kg
108-10-1	4-Methyl-2-pentanone	ND	4.37	mg/kg
67-64-1	Acetone	ND	21.8	mg/kg
71-43-2	Benzene	ND	4.37	mg/kg
108-86-1	Bromobenzene	ND	4.37	mg/kg
74-97-5	Bromochloromethane	ND	4.37	mg/kg
75-27-4	Bromodichloromethane	ND	4.37	mg/kg
75-25-2	Bromoform	ND	4.37	mg/kg
74-83-9	Bromomethane	ND	4.37	mg/kg
75-15-0	Carbon disulfide	ND	4.37	mg/kg
56-23-5	Carbon tetrachloride	ND	4.37	mg/kg
108-90-7	Chlorobenzene	ND	4.37	mg/kg
75-00-3	Chloroethane	ND	4.37	mg/kg
67-66-3	Chloroform	ND	4.37	mg/kg
74-87-3	Chloromethane	ND	4.37	mg/kg
156-59-2	cis-1,2-Dichloroethene	ND	4.37	mg/kg
10061-01-5	cis-1,3-Dichloropropene	ND	4.37	mg/kg
124-48-1	Dibromochloromethane	ND	4.37	mg/kg
74-95-3	Dibromomethane	ND	4.37	mg/kg
75-71-8	Dichlorodifluoromethane	ND	4.37	mg/kg
100-41-4	Ethylbenzene	ND	4.37	mg/kg
87-68-3	Hexachlorobutadiene	ND	4.37	mg/kg
98-82-8	Isopropylbenzene (Cumene)	ND	4.37	mg/kg
136777-61-2	m,p-Xylene	ND	8.74	mg/kg
75-09-2	Methylene chloride	ND	8.74	mg/kg
91-20-3	Naphthalene	ND	4.37	mg/kg
104-51-8	n-Butylbenzene	ND	4.37	mg/kg
103-65-1	n-Propylbenzene	ND	4.37	mg/kg
95-47-6	o-Xylene	ND	4.37	mg/kg
135-98-8	sec-Butylbenzene	ND	4.37	mg/kg
100-42-5	Styrene	ND	4.37	mg/kg
1634-04-4	tert-Butyl methyl ether (MTBE)	ND	4.37	mg/kg

Sample Results

WD-4@10	Collect Date	03/09/2017 08:47	GCAL ID	21703141403
	Receive Date	03/14/2017 09:55	Matrix	Solid

EPA 8260B (Continued)

*Results Reported on Dry Weight Basis

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	1000	03/15/2017 17:18	LBH	606324

CAS#	Parameter	Result	LOQ	Units
98-06-6	tert-Butylbenzene	ND	4.37	mg/kg
108-88-3	Toluene	ND	4.37	mg/kg
156-60-5	trans-1,2-Dichloroethene	ND	4.37	mg/kg
10061-02-6	trans-1,3-Dichloropropene	ND	4.37	mg/kg
110-57-6	trans-1,4-Dichloro-2-butene	ND	4.37	mg/kg
79-01-6	**Trichloroethene**	**33.2**	**4.37**	**mg/kg**
75-69-4	Trichlorofluoromethane	ND	4.37	mg/kg
76-13-1	Trichlorotrifluoroethane	ND	4.37	mg/kg
75-01-4	Vinyl chloride	ND	4.37	mg/kg
1330-20-7	Xylene (total)	ND	13.1	mg/kg

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	35.90	35.9	ug/Kg	100	62 - 127
1868-53-7	Dibromofluoromethane	35.90	35.5	ug/Kg	99	65 - 130
2037-26-5	Toluene d8	35.90	35.5	ug/Kg	99	71 - 132
17060-07-0	1,2-Dichloroethane-d4	35.90	35	ug/Kg	98	62 - 125

EPA 8260B

*Results Reported on Dry Weight Basis

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	10000	03/15/2017 13:48	LBH	606324

CAS#	Parameter	Result	LOQ	Units
127-18-4	**Tetrachloroethene**	**487**	**43.7**	**mg/kg**

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	359	350	ug/Kg	98	62 - 127
1868-53-7	Dibromofluoromethane	359	349	ug/Kg	97	65 - 130
2037-26-5	Toluene d8	359	371	ug/Kg	103	71 - 132
17060-07-0	1,2-Dichloroethane-d4	359	343	ug/Kg	96	62 - 125

Sample Results

WD-8@5	**Collect Date**	03/09/2017 09:44	**GCAL ID**	21703141404
	Receive Date	03/14/2017 09:55	**Matrix**	Solid

EPA 8260B *Results Reported on Dry Weight Basis

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	1000	03/15/2017 17:41	LBH	606324

CAS#	Parameter	Result	LOQ	Units
630-20-6	1,1,1,2-Tetrachloroethane	ND	7.24	mg/kg
71-55-6	1,1,1-Trichloroethane	ND	7.24	mg/kg
79-34-5	1,1,2,2-Tetrachloroethane	ND	7.24	mg/kg
79-00-5	1,1,2-Trichloroethane	ND	7.24	mg/kg
75-34-3	1,1-Dichloroethane	ND	7.24	mg/kg
75-35-4	1,1-Dichloroethene	ND	7.24	mg/kg
563-58-6	1,1-Dichloropropene	ND	7.24	mg/kg
96-18-4	1,2,3-Trichloropropane	ND	7.24	mg/kg
120-82-1	1,2,4-Trichlorobenzene	ND	7.24	mg/kg
95-63-6	1,2,4-Trimethylbenzene	ND	7.24	mg/kg
96-12-8	1,2-Dibromo-3-chloropropane	ND	7.24	mg/kg
106-93-4	1,2-Dibromoethane	ND	7.24	mg/kg
95-50-1	1,2-Dichlorobenzene	ND	7.24	mg/kg
107-06-2	1,2-Dichloroethane	ND	7.24	mg/kg
540-59-0	1,2-Dichloroethene(Total)	ND	14.5	mg/kg
78-87-5	1,2-Dichloropropane	ND	7.24	mg/kg
108-67-8	1,3,5-Trimethylbenzene	ND	7.24	mg/kg
541-73-1	1,3-Dichlorobenzene	ND	7.24	mg/kg
142-28-9	1,3-Dichloropropane	ND	7.24	mg/kg
106-46-7	1,4-Dichlorobenzene	ND	7.24	mg/kg
594-20-7	2,2-Dichloropropane	ND	7.24	mg/kg
78-93-3	2-Butanone	ND	7.24	mg/kg
95-49-8	2-Chlorotoluene	ND	7.24	mg/kg
591-78-6	2-Hexanone	ND	7.24	mg/kg
106-43-4	4-Chlorotoluene	ND	7.24	mg/kg
99-87-6	4-Isopropyltoluene	ND	7.24	mg/kg
108-10-1	4-Methyl-2-pentanone	ND	7.24	mg/kg
67-64-1	Acetone	ND	36.2	mg/kg
71-43-2	Benzene	ND	7.24	mg/kg
108-86-1	Bromobenzene	ND	7.24	mg/kg
74-97-5	Bromochloromethane	ND	7.24	mg/kg
75-27-4	Bromodichloromethane	ND	7.24	mg/kg
75-25-2	Bromoform	ND	7.24	mg/kg
74-83-9	Bromomethane	ND	7.24	mg/kg
75-15-0	Carbon disulfide	ND	7.24	mg/kg
56-23-5	Carbon tetrachloride	ND	7.24	mg/kg
108-90-7	Chlorobenzene	ND	7.24	mg/kg
75-00-3	Chloroethane	ND	7.24	mg/kg
67-66-3	Chloroform	ND	7.24	mg/kg
74-87-3	Chloromethane	ND	7.24	mg/kg
156-59-2	cis-1,2-Dichloroethene	ND	7.24	mg/kg
10061-01-5	cis-1,3-Dichloropropene	ND	7.24	mg/kg
124-48-1	Dibromochloromethane	ND	7.24	mg/kg
74-95-3	Dibromomethane	ND	7.24	mg/kg
75-71-8	Dichlorodifluoromethane	ND	7.24	mg/kg
100-41-4	Ethylbenzene	ND	7.24	mg/kg
87-68-3	Hexachlorobutadiene	ND	7.24	mg/kg

Sample Results

WD-8@5	**Collect Date**	03/09/2017 09:44	**GCAL ID**	21703141404
	Receive Date	03/14/2017 09:55	**Matrix**	Solid

EPA 8260B (Continued) *Results Reported on Dry Weight Basis

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	1000	03/15/2017 17:41	LBH	606324

CAS#	Parameter	Result	LOQ	Units
98-82-8	Isopropylbenzene (Cumene)	ND	7.24	mg/kg
136777-61-2	m,p-Xylene	ND	14.5	mg/kg
75-09-2	Methylene chloride	ND	14.5	mg/kg
91-20-3	Naphthalene	ND	7.24	mg/kg
104-51-8	n-Butylbenzene	ND	7.24	mg/kg
103-65-1	n-Propylbenzene	ND	7.24	mg/kg
95-47-6	o-Xylene	ND	7.24	mg/kg
135-98-8	sec-Butylbenzene	ND	7.24	mg/kg
100-42-5	Styrene	ND	7.24	mg/kg
1634-04-4	tert-Butyl methyl ether (MTBE)	ND	7.24	mg/kg
98-06-6	tert-Butylbenzene	ND	7.24	mg/kg
108-88-3	Toluene	ND	7.24	mg/kg
156-60-5	trans-1,2-Dichloroethene	ND	7.24	mg/kg
10061-02-6	trans-1,3-Dichloropropene	ND	7.24	mg/kg
110-57-6	trans-1,4-Dichloro-2-butene	ND	7.24	mg/kg
79-01-6	Trichloroethene	ND	7.24	mg/kg
75-69-4	Trichlorofluoromethane	ND	7.24	mg/kg
76-13-1	Trichlorotrifluoroethane	ND	7.24	mg/kg
75-01-4	Vinyl chloride	ND	7.24	mg/kg
1330-20-7	Xylene (total)	ND	21.7	mg/kg

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	56.20	56.1	ug/Kg	100	62 - 127
1868-53-7	Dibromofluoromethane	56.20	55.2	ug/Kg	98	65 - 130
2037-26-5	Toluene d8	56.20	56.4	ug/Kg	100	71 - 132
17060-07-0	1,2-Dichloroethane-d4	56.20	55	ug/Kg	98	62 - 125

EPA 8260B *Results Reported on Dry Weight Basis

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	10000	03/15/2017 14:11	LBH	606324

CAS#	Parameter	Result	LOQ	Units
127-18-4	**Tetrachloroethene**	**526**	**72.4**	**mg/kg**

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	562	550	ug/Kg	98	62 - 127
1868-53-7	Dibromofluoromethane	562	544	ug/Kg	97	65 - 130
2037-26-5	Toluene d8	562	581	ug/Kg	103	71 - 132
17060-07-0	1,2-Dichloroethane-d4	562	531	ug/Kg	95	62 - 125

Sample Results

WD-11@10	**Collect Date**	03/09/2017 09:12	**GCAL ID**	21703141405
	Receive Date	03/14/2017 09:55	**Matrix**	Solid

EPA 8260B *Results Reported on Dry Weight Basis

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	500	03/15/2017 18:03	LBH	606324

CAS#	Parameter	Result	LOQ	Units
630-20-6	1,1,1,2-Tetrachloroethane	ND	2.18	mg/kg
71-55-6	1,1,1-Trichloroethane	ND	2.18	mg/kg
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.18	mg/kg
79-00-5	1,1,2-Trichloroethane	ND	2.18	mg/kg
75-34-3	1,1-Dichloroethane	ND	2.18	mg/kg
75-35-4	1,1-Dichloroethene	ND	2.18	mg/kg
563-58-6	1,1-Dichloropropene	ND	2.18	mg/kg
96-18-4	1,2,3-Trichloropropane	ND	2.18	mg/kg
120-82-1	1,2,4-Trichlorobenzene	ND	2.18	mg/kg
95-63-6	1,2,4-Trimethylbenzene	ND	2.18	mg/kg
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.18	mg/kg
106-93-4	1,2-Dibromoethane	ND	2.18	mg/kg
95-50-1	1,2-Dichlorobenzene	ND	2.18	mg/kg
107-06-2	1,2-Dichloroethane	ND	2.18	mg/kg
540-59-0	1,2-Dichloroethene(Total)	ND	4.35	mg/kg
78-87-5	1,2-Dichloropropane	ND	2.18	mg/kg
108-67-8	1,3,5-Trimethylbenzene	ND	2.18	mg/kg
541-73-1	1,3-Dichlorobenzene	ND	2.18	mg/kg
142-28-9	1,3-Dichloropropane	ND	2.18	mg/kg
106-46-7	1,4-Dichlorobenzene	ND	2.18	mg/kg
594-20-7	2,2-Dichloropropane	ND	2.18	mg/kg
78-93-3	2-Butanone	ND	2.18	mg/kg
95-49-8	2-Chlorotoluene	ND	2.18	mg/kg
591-78-6	2-Hexanone	ND	2.18	mg/kg
106-43-4	4-Chlorotoluene	ND	2.18	mg/kg
99-87-6	4-Isopropyltoluene	ND	2.18	mg/kg
108-10-1	4-Methyl-2-pentanone	ND	2.18	mg/kg
67-64-1	Acetone	ND	10.9	mg/kg
71-43-2	Benzene	ND	2.18	mg/kg
108-86-1	Bromobenzene	ND	2.18	mg/kg
74-97-5	Bromochloromethane	ND	2.18	mg/kg
75-27-4	Bromodichloromethane	ND	2.18	mg/kg
75-25-2	Bromoform	ND	2.18	mg/kg
74-83-9	Bromomethane	ND	2.18	mg/kg
75-15-0	Carbon disulfide	ND	2.18	mg/kg
56-23-5	Carbon tetrachloride	ND	2.18	mg/kg
108-90-7	Chlorobenzene	ND	2.18	mg/kg
75-00-3	Chloroethane	ND	2.18	mg/kg
67-66-3	Chloroform	ND	2.18	mg/kg
74-87-3	Chloromethane	ND	2.18	mg/kg
156-59-2	**cis-1,2-Dichloroethene**	**2.80**	**2.18**	**mg/kg**
10061-01-5	cis-1,3-Dichloropropene	ND	2.18	mg/kg
124-48-1	Dibromochloromethane	ND	2.18	mg/kg
74-95-3	Dibromomethane	ND	2.18	mg/kg
75-71-8	Dichlorodifluoromethane	ND	2.18	mg/kg
100-41-4	Ethylbenzene	ND	2.18	mg/kg
87-68-3	Hexachlorobutadiene	ND	2.18	mg/kg

Sample Results

WD-11@10	**Collect Date**	03/09/2017 09:12	**GCAL ID**	21703141405
	Receive Date	03/14/2017 09:55	**Matrix**	Solid

EPA 8260B (Continued) *Results Reported on Dry Weight Basis

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	500	03/15/2017 18:03	LBH	606324

CAS#	Parameter	Result	LOQ	Units
98-82-8	Isopropylbenzene (Cumene)	ND	2.18	mg/kg
136777-61-2	m,p-Xylene	ND	4.35	mg/kg
75-09-2	Methylene chloride	ND	4.35	mg/kg
91-20-3	Naphthalene	ND	2.18	mg/kg
104-51-8	n-Butylbenzene	ND	2.18	mg/kg
103-65-1	n-Propylbenzene	ND	2.18	mg/kg
95-47-6	o-Xylene	ND	2.18	mg/kg
135-98-8	sec-Butylbenzene	ND	2.18	mg/kg
100-42-5	Styrene	ND	2.18	mg/kg
1634-04-4	tert-Butyl methyl ether (MTBE)	ND	2.18	mg/kg
98-06-6	tert-Butylbenzene	ND	2.18	mg/kg
108-88-3	Toluene	ND	2.18	mg/kg
156-60-5	trans-1,2-Dichloroethene	ND	2.18	mg/kg
10061-02-6	trans-1,3-Dichloropropene	ND	2.18	mg/kg
110-57-6	trans-1,4-Dichloro-2-butene	ND	2.18	mg/kg
79-01-6	**Trichloroethene**	**2.79**	**2.18**	**mg/kg**
75-69-4	Trichlorofluoromethane	ND	2.18	mg/kg
76-13-1	Trichlorotrifluoroethane	ND	2.18	mg/kg
75-01-4	Vinyl chloride	ND	2.18	mg/kg
1330-20-7	Xylene (total)	ND	6.53	mg/kg

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	17.50	17.6	ug/Kg	101	62 - 127
1868-53-7	Dibromofluoromethane	17.50	17.6	ug/Kg	101	65 - 130
2037-26-5	Toluene d8	17.50	18.5	ug/Kg	106	71 - 132
17060-07-0	1,2-Dichloroethane-d4	17.50	17.5	ug/Kg	100	62 - 125

EPA 8260B *Results Reported on Dry Weight Basis

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	5000	03/15/2017 15:00	LBH	606324

CAS#	Parameter	Result	LOQ	Units
127-18-4	**Tetrachloroethene**	**141**	**21.8**	**mg/kg**

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	175	175	ug/Kg	100	62 - 127
1868-53-7	Dibromofluoromethane	175	170	ug/Kg	97	65 - 130
2037-26-5	Toluene d8	175	184	ug/Kg	105	71 - 132
17060-07-0	1,2-Dichloroethane-d4	175	172	ug/Kg	98	62 - 125

Sample Results

ADD-1@6

Collect Date	03/09/2017 08:58	**GCAL ID**	21703141406
Receive Date	03/14/2017 09:55	**Matrix**	Solid

EPA 8260B

*Results Reported on Dry Weight Basis

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	50	03/15/2017 15:46	LBH	606324

CAS#	Parameter	Result	LOQ	Units
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.212	mg/kg
71-55-6	1,1,1-Trichloroethane	ND	0.212	mg/kg
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.212	mg/kg
79-00-5	1,1,2-Trichloroethane	ND	0.212	mg/kg
75-34-3	1,1-Dichloroethane	ND	0.212	mg/kg
75-35-4	1,1-Dichloroethene	ND	0.212	mg/kg
563-58-6	1,1-Dichloropropene	ND	0.212	mg/kg
96-18-4	1,2,3-Trichloropropane	ND	0.212	mg/kg
120-82-1	1,2,4-Trichlorobenzene	ND	0.212	mg/kg
95-63-6	1,2,4-Trimethylbenzene	ND	0.212	mg/kg
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.212	mg/kg
106-93-4	1,2-Dibromoethane	ND	0.212	mg/kg
95-50-1	1,2-Dichlorobenzene	ND	0.212	mg/kg
107-06-2	1,2-Dichloroethane	ND	0.212	mg/kg
540-59-0	**1,2-Dichloroethene(Total)**	**5.14**	**0.423**	**mg/kg**
78-87-5	1,2-Dichloropropane	ND	0.212	mg/kg
108-67-8	1,3,5-Trimethylbenzene	ND	0.212	mg/kg
541-73-1	1,3-Dichlorobenzene	ND	0.212	mg/kg
142-28-9	1,3-Dichloropropane	ND	0.212	mg/kg
106-46-7	1,4-Dichlorobenzene	ND	0.212	mg/kg
594-20-7	2,2-Dichloropropane	ND	0.212	mg/kg
78-93-3	2-Butanone	ND	0.212	mg/kg
95-49-8	2-Chlorotoluene	ND	0.212	mg/kg
591-78-6	2-Hexanone	ND	0.212	mg/kg
106-43-4	4-Chlorotoluene	ND	0.212	mg/kg
99-87-6	4-Isopropyltoluene	ND	0.212	mg/kg
108-10-1	4-Methyl-2-pentanone	ND	0.212	mg/kg
67-64-1	Acetone	ND	1.06	mg/kg
71-43-2	Benzene	ND	0.212	mg/kg
108-86-1	Bromobenzene	ND	0.212	mg/kg
74-97-5	Bromochloromethane	ND	0.212	mg/kg
75-27-4	Bromodichloromethane	ND	0.212	mg/kg
75-25-2	Bromoform	ND	0.212	mg/kg
74-83-9	Bromomethane	ND	0.212	mg/kg
75-15-0	Carbon disulfide	ND	0.212	mg/kg
56-23-5	Carbon tetrachloride	ND	0.212	mg/kg
108-90-7	Chlorobenzene	ND	0.212	mg/kg
75-00-3	Chloroethane	ND	0.212	mg/kg
67-66-3	Chloroform	ND	0.212	mg/kg
74-87-3	Chloromethane	ND	0.212	mg/kg
156-59-2	**cis-1,2-Dichloroethene**	**5.14**	**0.212**	**mg/kg**
10061-01-5	cis-1,3-Dichloropropene	ND	0.212	mg/kg
124-48-1	Dibromochloromethane	ND	0.212	mg/kg
74-95-3	Dibromomethane	ND	0.212	mg/kg
75-71-8	Dichlorodifluoromethane	ND	0.212	mg/kg
100-41-4	Ethylbenzene	ND	0.212	mg/kg
87-68-3	Hexachlorobutadiene	ND	0.212	mg/kg

Sample Results

ADD-1@6

Collect Date	03/09/2017 08:58	**GCAL ID**	21703141406
Receive Date	03/14/2017 09:55	**Matrix**	Solid

EPA 8260B (Continued)

*Results Reported on Dry Weight Basis

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	50	03/15/2017 15:46	LBH	606324

CAS#	Parameter	Result	LOQ	Units
98-82-8	Isopropylbenzene (Cumene)	ND	0.212	mg/kg
136777-61-2	m,p-Xylene	ND	0.423	mg/kg
75-09-2	Methylene chloride	ND	0.423	mg/kg
91-20-3	Naphthalene	ND	0.212	mg/kg
104-51-8	n-Butylbenzene	ND	0.212	mg/kg
103-65-1	n-Propylbenzene	ND	0.212	mg/kg
95-47-6	o-Xylene	ND	0.212	mg/kg
135-98-8	sec-Butylbenzene	ND	0.212	mg/kg
100-42-5	Styrene	ND	0.212	mg/kg
1634-04-4	tert-Butyl methyl ether (MTBE)	ND	0.212	mg/kg
98-06-6	tert-Butylbenzene	ND	0.212	mg/kg
108-88-3	Toluene	ND	0.212	mg/kg
156-60-5	trans-1,2-Dichloroethene	ND	0.212	mg/kg
10061-02-6	trans-1,3-Dichloropropene	ND	0.212	mg/kg
110-57-6	trans-1,4-Dichloro-2-butene	ND	0.212	mg/kg
79-01-6	**Trichloroethene**	**1.63**	**0.212**	**mg/kg**
75-69-4	Trichlorofluoromethane	ND	0.212	mg/kg
76-13-1	Trichlorotrifluoroethane	ND	0.212	mg/kg
75-01-4	Vinyl chloride	ND	0.212	mg/kg
1330-20-7	Xylene (total)	ND	0.635	mg/kg

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	1.75	1.8	ug/Kg	103	62 - 127
1868-53-7	Dibromofluoromethane	1.75	1.71	ug/Kg	98	65 - 130
2037-26-5	Toluene d8	1.75	1.78	ug/Kg	102	71 - 132
17060-07-0	1,2-Dichloroethane-d4	1.75	1.8	ug/Kg	103	62 - 125

EPA 8260B

*Results Reported on Dry Weight Basis

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	250	03/15/2017 12:39	LBH	606324

CAS#	Parameter	Result	LOQ	Units
127-18-4	**Tetrachloroethene**	**22.2**	**1.06**	**mg/kg**

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	8.73	8.56	ug/Kg	98	62 - 127
1868-53-7	Dibromofluoromethane	8.73	8.52	ug/Kg	98	65 - 130
2037-26-5	Toluene d8	8.73	9.01	ug/Kg	103	71 - 132
17060-07-0	1,2-Dichloroethane-d4	8.73	8.55	ug/Kg	98	62 - 125

Sample Results

ADD-1@10	**Collect Date**	03/09/2017 09:06	**GCAL ID**	21703141407
	Receive Date	03/14/2017 09:55	**Matrix**	Solid

EPA 8260B *Results Reported on Dry Weight Basis

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	100	03/15/2017 18:26	LBH	606324

CAS#	Parameter	Result	LOQ	Units
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.430	mg/kg
71-55-6	1,1,1-Trichloroethane	ND	0.430	mg/kg
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.430	mg/kg
79-00-5	1,1,2-Trichloroethane	ND	0.430	mg/kg
75-34-3	1,1-Dichloroethane	ND	0.430	mg/kg
75-35-4	1,1-Dichloroethene	ND	0.430	mg/kg
563-58-6	1,1-Dichloropropene	ND	0.430	mg/kg
96-18-4	1,2,3-Trichloropropane	ND	0.430	mg/kg
120-82-1	1,2,4-Trichlorobenzene	ND	0.430	mg/kg
95-63-6	1,2,4-Trimethylbenzene	ND	0.430	mg/kg
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.430	mg/kg
106-93-4	1,2-Dibromoethane	ND	0.430	mg/kg
95-50-1	1,2-Dichlorobenzene	ND	0.430	mg/kg
107-06-2	1,2-Dichloroethane	ND	0.430	mg/kg
540-59-0	**1,2-Dichloroethene(Total)**	**2.34**	**0.861**	**mg/kg**
78-87-5	1,2-Dichloropropane	ND	0.430	mg/kg
108-67-8	1,3,5-Trimethylbenzene	ND	0.430	mg/kg
541-73-1	1,3-Dichlorobenzene	ND	0.430	mg/kg
142-28-9	1,3-Dichloropropane	ND	0.430	mg/kg
106-46-7	1,4-Dichlorobenzene	ND	0.430	mg/kg
594-20-7	2,2-Dichloropropane	ND	0.430	mg/kg
78-93-3	2-Butanone	ND	0.430	mg/kg
95-49-8	2-Chlorotoluene	ND	0.430	mg/kg
591-78-6	2-Hexanone	ND	0.430	mg/kg
106-43-4	4-Chlorotoluene	ND	0.430	mg/kg
99-87-6	4-Isopropyltoluene	ND	0.430	mg/kg
108-10-1	4-Methyl-2-pentanone	ND	0.430	mg/kg
67-64-1	Acetone	ND	2.15	mg/kg
71-43-2	Benzene	ND	0.430	mg/kg
108-86-1	Bromobenzene	ND	0.430	mg/kg
74-97-5	Bromochloromethane	ND	0.430	mg/kg
75-27-4	Bromodichloromethane	ND	0.430	mg/kg
75-25-2	Bromoform	ND	0.430	mg/kg
74-83-9	Bromomethane	ND	0.430	mg/kg
75-15-0	Carbon disulfide	ND	0.430	mg/kg
56-23-5	Carbon tetrachloride	ND	0.430	mg/kg
108-90-7	Chlorobenzene	ND	0.430	mg/kg
75-00-3	Chloroethane	ND	0.430	mg/kg
67-66-3	Chloroform	ND	0.430	mg/kg
74-87-3	Chloromethane	ND	0.430	mg/kg
156-59-2	**cis-1,2-Dichloroethene**	**2.34**	**0.430**	**mg/kg**
10061-01-5	cis-1,3-Dichloropropene	ND	0.430	mg/kg
124-48-1	Dibromochloromethane	ND	0.430	mg/kg
74-95-3	Dibromomethane	ND	0.430	mg/kg
75-71-8	Dichlorodifluoromethane	ND	0.430	mg/kg
100-41-4	Ethylbenzene	ND	0.430	mg/kg
87-68-3	Hexachlorobutadiene	ND	0.430	mg/kg

Sample Results

ADD-1@10				
	Collect Date	03/09/2017 09:06	GCAL ID	21703141407
	Receive Date	03/14/2017 09:55	Matrix	Solid

EPA 8260B (Continued) *Results Reported on Dry Weight Basis

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	100	03/15/2017 18:26	LBH	606324

CAS#	Parameter	Result	LOQ	Units
98-82-8	Isopropylbenzene (Cumene)	ND	0.430	mg/kg
136777-61-2	m,p-Xylene	ND	0.861	mg/kg
75-09-2	Methylene chloride	ND	0.861	mg/kg
91-20-3	Naphthalene	ND	0.430	mg/kg
104-51-8	n-Butylbenzene	ND	0.430	mg/kg
103-65-1	n-Propylbenzene	ND	0.430	mg/kg
95-47-6	o-Xylene	ND	0.430	mg/kg
135-98-8	sec-Butylbenzene	ND	0.430	mg/kg
100-42-5	Styrene	ND	0.430	mg/kg
1634-04-4	tert-Butyl methyl ether (MTBE)	ND	0.430	mg/kg
98-06-6	tert-Butylbenzene	ND	0.430	mg/kg
108-88-3	Toluene	ND	0.430	mg/kg
156-60-5	trans-1,2-Dichloroethene	ND	0.430	mg/kg
10061-02-6	trans-1,3-Dichloropropene	ND	0.430	mg/kg
110-57-6	trans-1,4-Dichloro-2-butene	ND	0.430	mg/kg
79-01-6	**Trichloroethene**	**1.79**	**0.430**	**mg/kg**
75-69-4	Trichlorofluoromethane	ND	0.430	mg/kg
76-13-1	Trichlorotrifluoroethane	ND	0.430	mg/kg
75-01-4	Vinyl chloride	ND	0.430	mg/kg
1330-20-7	Xylene (total)	ND	1.29	mg/kg

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	3.70	3.85	ug/Kg	104	62 - 127
1868-53-7	Dibromofluoromethane	3.70	3.65	ug/Kg	99	65 - 130
2037-26-5	Toluene d8	3.70	3.7	ug/Kg	100	71 - 132
17060-07-0	1,2-Dichloroethane-d4	3.70	3.78	ug/Kg	102	62 - 125

EPA 8260B *Results Reported on Dry Weight Basis

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	1000	03/15/2017 15:23	LBH	606324

CAS#	Parameter	Result	LOQ	Units
127-18-4	**Tetrachloroethene**	**56.9**	**4.30**	**mg/kg**

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	37	37.3	ug/Kg	101	62 - 127
1868-53-7	Dibromofluoromethane	37	36.5	ug/Kg	99	65 - 130
2037-26-5	Toluene d8	37	38.2	ug/Kg	103	71 - 132
17060-07-0	1,2-Dichloroethane-d4	37	35.8	ug/Kg	97	62 - 125

Sample Results

ADD-2@5

Collect Date	03/09/2017 08:30	**GCAL ID**	21703141408
Receive Date	03/14/2017 09:55	**Matrix**	Solid

EPA 8260B

*Results Reported on Dry Weight Basis

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	50	03/15/2017 16:32	LBH	606324

CAS#	Parameter	Result	LOQ	Units
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.216	mg/kg
71-55-6	1,1,1-Trichloroethane	ND	0.216	mg/kg
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.216	mg/kg
79-00-5	1,1,2-Trichloroethane	ND	0.216	mg/kg
75-34-3	1,1-Dichloroethane	ND	0.216	mg/kg
75-35-4	1,1-Dichloroethene	ND	0.216	mg/kg
563-58-6	1,1-Dichloropropene	ND	0.216	mg/kg
96-18-4	1,2,3-Trichloropropane	ND	0.216	mg/kg
120-82-1	1,2,4-Trichlorobenzene	ND	0.216	mg/kg
95-63-6	1,2,4-Trimethylbenzene	ND	0.216	mg/kg
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.216	mg/kg
106-93-4	1,2-Dibromoethane	ND	0.216	mg/kg
95-50-1	1,2-Dichlorobenzene	ND	0.216	mg/kg
107-06-2	1,2-Dichloroethane	ND	0.216	mg/kg
540-59-0	**1,2-Dichloroethene(Total)**	**4.22**	**0.432**	**mg/kg**
78-87-5	1,2-Dichloropropane	ND	0.216	mg/kg
108-67-8	1,3,5-Trimethylbenzene	ND	0.216	mg/kg
541-73-1	1,3-Dichlorobenzene	ND	0.216	mg/kg
142-28-9	1,3-Dichloropropane	ND	0.216	mg/kg
106-46-7	1,4-Dichlorobenzene	ND	0.216	mg/kg
594-20-7	2,2-Dichloropropane	ND	0.216	mg/kg
78-93-3	2-Butanone	ND	0.216	mg/kg
95-49-8	2-Chlorotoluene	ND	0.216	mg/kg
591-78-6	2-Hexanone	ND	0.216	mg/kg
106-43-4	4-Chlorotoluene	ND	0.216	mg/kg
99-87-6	4-Isopropyltoluene	ND	0.216	mg/kg
108-10-1	4-Methyl-2-pentanone	ND	0.216	mg/kg
67-64-1	Acetone	ND	1.08	mg/kg
71-43-2	Benzene	ND	0.216	mg/kg
108-86-1	Bromobenzene	ND	0.216	mg/kg
74-97-5	Bromochloromethane	ND	0.216	mg/kg
75-27-4	Bromodichloromethane	ND	0.216	mg/kg
75-25-2	Bromoform	ND	0.216	mg/kg
74-83-9	Bromomethane	ND	0.216	mg/kg
75-15-0	Carbon disulfide	ND	0.216	mg/kg
56-23-5	Carbon tetrachloride	ND	0.216	mg/kg
108-90-7	Chlorobenzene	ND	0.216	mg/kg
75-00-3	Chloroethane	ND	0.216	mg/kg
67-66-3	Chloroform	ND	0.216	mg/kg
74-87-3	Chloromethane	ND	0.216	mg/kg
156-59-2	**cis-1,2-Dichloroethene**	**4.22**	**0.216**	**mg/kg**
10061-01-5	cis-1,3-Dichloropropene	ND	0.216	mg/kg
124-48-1	Dibromochloromethane	ND	0.216	mg/kg
74-95-3	Dibromomethane	ND	0.216	mg/kg
75-71-8	Dichlorodifluoromethane	ND	0.216	mg/kg
100-41-4	Ethylbenzene	ND	0.216	mg/kg
87-68-3	Hexachlorobutadiene	ND	0.216	mg/kg

Sample Results

ADD-2@5

Collect Date	03/09/2017 08:30	**GCAL ID**	21703141408
Receive Date	03/14/2017 09:55	**Matrix**	Solid

EPA 8260B (Continued)

*Results Reported on Dry Weight Basis

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	50	03/15/2017 16:32	LBH	606324

CAS#	Parameter	Result	LOQ	Units
98-82-8	Isopropylbenzene (Cumene)	ND	0.216	mg/kg
136777-61-2	m,p-Xylene	ND	0.432	mg/kg
75-09-2	Methylene chloride	ND	0.432	mg/kg
91-20-3	Naphthalene	ND	0.216	mg/kg
104-51-8	n-Butylbenzene	ND	0.216	mg/kg
103-65-1	n-Propylbenzene	ND	0.216	mg/kg
95-47-6	o-Xylene	ND	0.216	mg/kg
135-98-8	sec-Butylbenzene	ND	0.216	mg/kg
100-42-5	Styrene	ND	0.216	mg/kg
1634-04-4	tert-Butyl methyl ether (MTBE)	ND	0.216	mg/kg
98-06-6	tert-Butylbenzene	ND	0.216	mg/kg
108-88-3	Toluene	ND	0.216	mg/kg
156-60-5	trans-1,2-Dichloroethene	ND	0.216	mg/kg
10061-02-6	trans-1,3-Dichloropropene	ND	0.216	mg/kg
110-57-6	trans-1,4-Dichloro-2-butene	ND	0.216	mg/kg
79-01-6	**Trichloroethene**	**1.61**	**0.216**	**mg/kg**
75-69-4	Trichlorofluoromethane	ND	0.216	mg/kg
76-13-1	Trichlorotrifluoroethane	ND	0.216	mg/kg
75-01-4	Vinyl chloride	ND	0.216	mg/kg
1330-20-7	Xylene (total)	ND	0.647	mg/kg

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	1.70	1.76	ug/Kg	103	62 - 127
1868-53-7	Dibromofluoromethane	1.70	1.64	ug/Kg	96	65 - 130
2037-26-5	Toluene d8	1.70	1.69	ug/Kg	99	71 - 132
17060-07-0	1,2-Dichloroethane-d4	1.70	1.76	ug/Kg	103	62 - 125

EPA 8260B

*Results Reported on Dry Weight Basis

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	500	03/15/2017 13:25	LBH	606324

CAS#	Parameter	Result	LOQ	Units
127-18-4	**Tetrachloroethene**	**26.2**	**2.16**	**mg/kg**

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	17	17	ug/Kg	100	62 - 127
1868-53-7	Dibromofluoromethane	17	16.9	ug/Kg	99	65 - 130
2037-26-5	Toluene d8	17	17.9	ug/Kg	105	71 - 132
17060-07-0	1,2-Dichloroethane-d4	17	16.6	ug/Kg	97	62 - 125

Sample Results

ADD-2@10	**Collect Date**	03/09/2017 08:39	**GCAL ID**	21703141409
	Receive Date	03/14/2017 09:55	**Matrix**	Solid

EPA 8260B *Results Reported on Dry Weight Basis

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	50	03/15/2017 13:02	LBH	606324

CAS#	Parameter	Result	LOQ	Units
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.201	mg/kg
71-55-6	1,1,1-Trichloroethane	ND	0.201	mg/kg
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.201	mg/kg
79-00-5	1,1,2-Trichloroethane	ND	0.201	mg/kg
75-34-3	1,1-Dichloroethane	ND	0.201	mg/kg
75-35-4	1,1-Dichloroethene	ND	0.201	mg/kg
563-58-6	1,1-Dichloropropene	ND	0.201	mg/kg
96-18-4	1,2,3-Trichloropropane	ND	0.201	mg/kg
120-82-1	1,2,4-Trichlorobenzene	ND	0.201	mg/kg
95-63-6	1,2,4-Trimethylbenzene	ND	0.201	mg/kg
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.201	mg/kg
106-93-4	1,2-Dibromoethane	ND	0.201	mg/kg
95-50-1	1,2-Dichlorobenzene	ND	0.201	mg/kg
107-06-2	1,2-Dichloroethane	ND	0.201	mg/kg
540-59-0	**1,2-Dichloroethene(Total)**	**7.10**	**0.402**	**mg/kg**
78-87-5	1,2-Dichloropropane	ND	0.201	mg/kg
108-67-8	1,3,5-Trimethylbenzene	ND	0.201	mg/kg
541-73-1	1,3-Dichlorobenzene	ND	0.201	mg/kg
142-28-9	1,3-Dichloropropane	ND	0.201	mg/kg
106-46-7	1,4-Dichlorobenzene	ND	0.201	mg/kg
594-20-7	2,2-Dichloropropane	ND	0.201	mg/kg
78-93-3	2-Butanone	ND	0.201	mg/kg
95-49-8	2-Chlorotoluene	ND	0.201	mg/kg
591-78-6	2-Hexanone	ND	0.201	mg/kg
106-43-4	4-Chlorotoluene	ND	0.201	mg/kg
99-87-6	4-Isopropyltoluene	ND	0.201	mg/kg
108-10-1	4-Methyl-2-pentanone	ND	0.201	mg/kg
67-64-1	Acetone	ND	1.00	mg/kg
71-43-2	Benzene	ND	0.201	mg/kg
108-86-1	Bromobenzene	ND	0.201	mg/kg
74-97-5	Bromochloromethane	ND	0.201	mg/kg
75-27-4	Bromodichloromethane	ND	0.201	mg/kg
75-25-2	Bromoform	ND	0.201	mg/kg
74-83-9	Bromomethane	ND	0.201	mg/kg
75-15-0	Carbon disulfide	ND	0.201	mg/kg
56-23-5	Carbon tetrachloride	ND	0.201	mg/kg
108-90-7	Chlorobenzene	ND	0.201	mg/kg
75-00-3	Chloroethane	ND	0.201	mg/kg
67-66-3	Chloroform	ND	0.201	mg/kg
74-87-3	Chloromethane	ND	0.201	mg/kg
156-59-2	**cis-1,2-Dichloroethene**	**7.10**	**0.201**	**mg/kg**
10061-01-5	cis-1,3-Dichloropropene	ND	0.201	mg/kg
124-48-1	Dibromochloromethane	ND	0.201	mg/kg
74-95-3	Dibromomethane	ND	0.201	mg/kg
75-71-8	Dichlorodifluoromethane	ND	0.201	mg/kg
100-41-4	Ethylbenzene	ND	0.201	mg/kg
87-68-3	Hexachlorobutadiene	ND	0.201	mg/kg

Sample Results

ADD-2@10

Collect Date	03/09/2017 08:39	**GCAL ID**	21703141409
Receive Date	03/14/2017 09:55	**Matrix**	Solid

EPA 8260B (Continued)

*Results Reported on Dry Weight Basis

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	50	03/15/2017 13:02	LBH	606324

CAS#	Parameter	Result	LOQ	Units
98-82-8	Isopropylbenzene (Cumene)	ND	0.201	mg/kg
136777-61-2	m,p-Xylene	ND	0.402	mg/kg
75-09-2	Methylene chloride	ND	0.402	mg/kg
91-20-3	Naphthalene	ND	0.201	mg/kg
104-51-8	n-Butylbenzene	ND	0.201	mg/kg
103-65-1	n-Propylbenzene	ND	0.201	mg/kg
95-47-6	o-Xylene	ND	0.201	mg/kg
135-98-8	sec-Butylbenzene	ND	0.201	mg/kg
100-42-5	Styrene	ND	0.201	mg/kg
1634-04-4	tert-Butyl methyl ether (MTBE)	ND	0.201	mg/kg
98-06-6	tert-Butylbenzene	ND	0.201	mg/kg
108-88-3	Toluene	ND	0.201	mg/kg
156-60-5	trans-1,2-Dichloroethene	ND	0.201	mg/kg
10061-02-6	trans-1,3-Dichloropropene	ND	0.201	mg/kg
110-57-6	trans-1,4-Dichloro-2-butene	ND	0.201	mg/kg
79-01-6	**Trichloroethene**	**3.52**	**0.201**	**mg/kg**
75-69-4	Trichlorofluoromethane	ND	0.201	mg/kg
76-13-1	Trichlorotrifluoroethane	ND	0.201	mg/kg
75-01-4	Vinyl chloride	ND	0.201	mg/kg
1330-20-7	Xylene (total)	ND	0.602	mg/kg

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	1.75	1.79	ug/Kg	102	62 - 127
1868-53-7	Dibromofluoromethane	1.75	1.72	ug/Kg	98	65 - 130
2037-26-5	Toluene d8	1.75	1.79	ug/Kg	102	71 - 132
17060-07-0	1,2-Dichloroethane-d4	1.75	1.82	ug/Kg	104	62 - 125

EPA 8260B

*Results Reported on Dry Weight Basis

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	250	03/15/2017 16:09	LBH	606324

CAS#	Parameter	Result	LOQ	Units
127-18-4	**Tetrachloroethene**	**8.89**	**1.00**	**mg/kg**

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	8.75	8.63	ug/Kg	99	62 - 127
1868-53-7	Dibromofluoromethane	8.75	8.54	ug/Kg	98	65 - 130
2037-26-5	Toluene d8	8.75	9.22	ug/Kg	105	71 - 132
17060-07-0	1,2-Dichloroethane-d4	8.75	8.79	ug/Kg	100	62 - 125

Sample Results

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Collect Date	03/09/2017 00:01	**GCAL ID**	21703141410
Receive Date	03/14/2017 09:55	**Matrix**	Water

EPA 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	1	03/16/2017 00:02	LBH	606389

CAS#	Parameter	Result	LOQ	Units
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.00	ug/L
71-55-6	1,1,1-Trichloroethane	ND	5.00	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.00	ug/L
79-00-5	1,1,2-Trichloroethane	ND	5.00	ug/L
75-34-3	1,1-Dichloroethane	ND	5.00	ug/L
75-35-4	1,1-Dichloroethene	ND	5.00	ug/L
563-58-6	1,1-Dichloropropene	ND	5.00	ug/L
96-18-4	1,2,3-Trichloropropane	ND	5.00	ug/L
120-82-1	1,2,4-Trichlorobenzene	ND	5.00	ug/L
95-63-6	1,2,4-Trimethylbenzene	ND	5.00	ug/L
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.00	ug/L
106-93-4	1,2-Dibromoethane	ND	5.00	ug/L
95-50-1	1,2-Dichlorobenzene	ND	5.00	ug/L
107-06-2	1,2-Dichloroethane	ND	5.00	ug/L
540-59-0	1,2-Dichloroethene(Total)	ND	10.0	ug/L
78-87-5	1,2-Dichloropropane	ND	5.00	ug/L
108-67-8	1,3,5-Trimethylbenzene	ND	5.00	ug/L
541-73-1	1,3-Dichlorobenzene	ND	5.00	ug/L
142-28-9	1,3-Dichloropropane	ND	5.00	ug/L
106-46-7	1,4-Dichlorobenzene	ND	5.00	ug/L
594-20-7	2,2-Dichloropropane	ND	5.00	ug/L
78-93-3	2-Butanone	ND	5.00	ug/L
95-49-8	2-Chlorotoluene	ND	5.00	ug/L
591-78-6	2-Hexanone	ND	5.00	ug/L
106-43-4	4-Chlorotoluene	ND	5.00	ug/L
99-87-6	4-Isopropyltoluene	ND	5.00	ug/L
108-10-1	4-Methyl-2-pentanone	ND	5.00	ug/L
67-64-1	Acetone	ND	5.00	ug/L
71-43-2	Benzene	ND	5.00	ug/L
108-86-1	Bromobenzene	ND	5.00	ug/L
74-97-5	Bromochloromethane	ND	5.00	ug/L
75-27-4	Bromodichloromethane	ND	5.00	ug/L
75-25-2	Bromoform	ND	5.00	ug/L
74-83-9	Bromomethane	ND	5.00	ug/L
75-15-0	Carbon disulfide	ND	5.00	ug/L
56-23-5	Carbon tetrachloride	ND	5.00	ug/L
108-90-7	Chlorobenzene	ND	5.00	ug/L
75-00-3	Chloroethane	ND	5.00	ug/L
67-66-3	Chloroform	ND	5.00	ug/L
74-87-3	Chloromethane	ND	5.00	ug/L
156-59-2	cis-1,2-Dichloroethene	ND	5.00	ug/L
10061-01-5	cis-1,3-Dichloropropene	ND	5.00	ug/L
124-48-1	Dibromochloromethane	ND	5.00	ug/L
74-95-3	Dibromomethane	ND	5.00	ug/L
75-71-8	Dichlorodifluoromethane	ND	5.00	ug/L
100-41-4	Ethylbenzene	ND	5.00	ug/L
87-68-3	Hexachlorobutadiene	ND	5.00	ug/L

Sample Results

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Collect Date	03/09/2017 00:01	**GCAL ID**	21703141410
Receive Date	03/14/2017 09:55	**Matrix**	Water

EPA 8260B (Continued)

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	1	03/16/2017 00:02	LBH	606389

CAS#	Parameter	Result	LOQ	Units
98-82-8	Isopropylbenzene (Cumene)	ND	5.00	ug/L
136777-61-2	m,p-Xylene	ND	10.0	ug/L
75-09-2	Methylene chloride	ND	5.00	ug/L
91-20-3	Naphthalene	ND	5.00	ug/L
104-51-8	n-Butylbenzene	ND	5.00	ug/L
103-65-1	n-Propylbenzene	ND	5.00	ug/L
95-47-6	o-Xylene	ND	5.00	ug/L
135-98-8	sec-Butylbenzene	ND	5.00	ug/L
100-42-5	Styrene	ND	5.00	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	ND	5.00	ug/L
98-06-6	tert-Butylbenzene	ND	5.00	ug/L
127-18-4	Tetrachloroethene	ND	5.00	ug/L
108-88-3	Toluene	ND	5.00	ug/L
156-60-5	trans-1,2-Dichloroethene	ND	5.00	ug/L
10061-02-6	trans-1,3-Dichloropropene	ND	5.00	ug/L
110-57-6	trans-1,4-Dichloro-2-butene	ND	5.00	ug/L
79-01-6	Trichloroethene	ND	5.00	ug/L
75-69-4	Trichlorofluoromethane	ND	5.00	ug/L
76-13-1	Trichlorotrifluoroethane	ND	5.00	ug/L
75-01-4	Vinyl chloride	ND	2.00	ug/L
1330-20-7	Xylene (total)	ND	15.0	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	50.3	ug/L	101	78 - 130
1868-53-7	Dibromofluoromethane	50	49.6	ug/L	99	77 - 127
2037-26-5	Toluene d8	50	52.7	ug/L	105	76 - 134
17060-07-0	1,2-Dichloroethane-d4	50	47.9	ug/L	96	71 - 127

GC/MS Volatiles QC Summary

Analytical Batch 606324	Client ID	MB606324		LCS606324				LCSD606324				
	GCAL ID	1664345		1664346				1664347				
	Sample Type	MB		LCS				LCSD				
	Prep Date	NA		NA				NA				
	Analysis Date	03/15/2017 11:30		03/15/2017 09:19				03/15/2017 09:42				
	Matrix	Solid		Solid				Solid				
EPA 8260B		Units Result	mg/kg LOQ	Spike Added	Result	%R	Control Limits%R	Spike Added	Result	%R	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	630-20-6	ND	0.250	2.50	2.54	102	77 - 122	2.50	2.70	108	6	30
1,1,1-Trichloroethane	71-55-6	ND	0.250	2.50	2.58	103	70 - 130	2.50	2.75	110	6	30
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.250	2.50	2.17	87	66 - 129	2.50	2.45	98	12	30
1,1,2-Trichloroethane	79-00-5	ND	0.250	2.50	2.49	100	74 - 120	2.50	2.71	108	8	30
1,1-Dichloroethane	75-34-3	ND	0.250	2.50	2.54	102	71 - 126	2.50	2.70	108	6	30
1,1-Dichloroethene	75-35-4	ND	0.250	2.50	2.31	92	68 - 129	2.50	2.41	96	4	20
1,1-Dichloropropene	563-58-6	ND	0.250	2.50	2.41	96	70 - 138	2.50	2.50	100	4	30
1,2,3-Trichloropropane	96-18-4	ND	0.250	2.50	2.33	93	63 - 132	2.50	2.61	104	11	30
1,2,4-Trichlorobenzene	120-82-1	ND	0.250	2.50	2.62	105	64 - 135	2.50	2.68	107	2	30
1,2,4-Trimethylbenzene	95-63-6	ND	0.250	2.50	2.64	106	75 - 130	2.50	2.78	111	5	30
1,2-Dibromo-3-chloropropane	96-12-8	ND	0.250	2.50	2.38	95	60 - 123	2.50	2.78	111	16	30
1,2-Dibromoethane	106-93-4	ND	0.250	2.50	2.26	90	74 - 122	2.50	2.52	101	11	30
1,2-Dichlorobenzene	95-50-1	ND	0.250	2.50	2.57	103	76 - 125	2.50	2.77	111	7	30
1,2-Dichloroethane	107-06-2	ND	0.250	2.50	2.40	96	68 - 126	2.50	2.67	107	11	30
1,2-Dichloroethene(Total)	540-59-0	ND	0.500	5.00	4.65	93	72 - 129	5.00	4.96	99	6	30
1,2-Dichloropropane	78-87-5	ND	0.250	2.50	2.31	92	72 - 129	2.50	2.49	100	8	30
1,3,5-Trimethylbenzene	108-67-8	ND	0.250	2.50	2.82	113	74 - 136	2.50	2.96	118	5	30
1,3-Dichlorobenzene	541-73-1	ND	0.250	2.50	2.65	106	77 - 127	2.50	2.80	112	6	30
1,3-Dichloropropane	142-28-9	ND	0.250	2.50	2.53	101	77 - 121	2.50	2.77	111	9	30
1,4-Dichlorobenzene	106-46-7	ND	0.250	2.50	2.60	104	74 - 123	2.50	2.71	108	4	30
2,2-Dichloropropane	594-20-7	ND	0.250	2.50	2.53	101	74 - 129	2.50	2.67	107	5	30
2-Butanone	78-93-3	ND	0.250	2.50	2.06	82	47 - 142	2.50	2.40	96	15	30
2-Chlorotoluene	95-49-8	ND	0.250	2.50	2.55	102	75 - 132	2.50	2.71	108	6	30
2-Hexanone	591-78-6	ND	0.250	2.50	2.18	87	47 - 137	2.50	2.52	101	14	30
4-Chlorotoluene	106-43-4	ND	0.250	2.50	2.67	107	74 - 133	2.50	2.81	112	5	30
4-Isopropyltoluene	99-87-6	ND	0.250	2.50	2.71	108	71 - 136	2.50	2.77	111	2	30
4-Methyl-2-pentanone	108-10-1	ND	0.250	2.50	2.37	95	52 - 136	2.50	2.70	108	13	30
Acetone	67-64-1	ND	1.25	2.50	2.24	90	38 - 152	2.50	2.62	105	16	30
Benzene	71-43-2	ND	0.250	2.50	2.55	102	73 - 128	2.50	2.74	110	7	20
Bromobenzene	108-86-1	ND	0.250	2.50	2.48	99	73 - 124	2.50	2.62	105	5	30
Bromochloromethane	74-97-5	ND	0.250	2.50	2.37	95	73 - 127	2.50	2.61	104	10	30
Bromodichloromethane	75-27-4	ND	0.250	2.50	2.55	102	74 - 126	2.50	2.74	110	7	30
Bromoform	75-25-2	ND	0.250	2.50	2.40	96	67 - 122	2.50	2.73	109	13	30
Bromomethane	74-83-9	ND	0.250	2.50	2.20	88	48 - 139	2.50	2.30	92	4	30
Carbon disulfide	75-15-0	ND	0.250	2.50	2.31	92	68 - 133	2.50	2.39	96	3	30
Carbon tetrachloride	56-23-5	ND	0.250	2.50	2.34	94	71 - 133	2.50	2.45	98	5	30
Chlorobenzene	108-90-7	ND	0.250	2.50	2.55	102	75 - 121	2.50	2.69	108	5	20
Chloroethane	75-00-3	ND	0.250	2.50	2.24	90	57 - 144	2.50	2.29	92	2	30
Chloroform	67-66-3	ND	0.250	2.50	2.54	102	74 - 124	2.50	2.70	108	6	30
Chloromethane	74-87-3	ND	0.250	2.50	2.41	96	61 - 130	2.50	2.55	102	6	30
cis-1,2-Dichloroethene	156-59-2	ND	0.250	2.50	2.33	93	72 - 130	2.50	2.48	99	6	30
cis-1,3-Dichloropropene	10061-01-5	ND	0.250	2.50	2.31	92	72 - 129	2.50	2.48	99	7	30
Dibromochloromethane	124-48-1	ND	0.250	2.50	2.57	103	74 - 122	2.50	2.79	112	8	30
Dibromomethane	74-95-3	ND	0.250	2.50	2.21	88	72 - 125	2.50	2.48	99	12	30
Dichlorodifluoromethane	75-71-8	ND	0.250	2.50	2.48	99	59 - 138	2.50	2.60	104	5	30
Ethylbenzene	100-41-4	ND	0.250	2.50	2.63	105	74 - 130	2.50	2.78	111	6	30
Hexachlorobutadiene	87-68-3	ND	0.250	2.50	3.19	128	71 - 140	2.50	3.10	124	3	30
Isopropylbenzene (Cumene)	98-82-8	ND	0.250	2.50	2.49	100	74 - 125	2.50	2.62	105	5	30
m,p-Xylene	136777-61-2	ND	0.500	5.00	4.91	98	72 - 128	5.00	5.15	103	5	30
Methylene chloride	75-09-2	ND	0.500	2.50	2.45	98	66 - 130	2.50	2.62	105	7	30
Naphthalene	91-20-3	ND	0.250	2.50	2.51	100	54 - 132	2.50	2.74	110	9	35
n-Butylbenzene	104-51-8	ND	0.250	2.50	2.73	109	68 - 144	2.50	2.80	112	3	30
n-Propylbenzene	103-65-1	ND	0.250	2.50	2.65	106	73 - 137	2.50	2.71	108	2	30
o-Xylene	95-47-6	ND	0.250	2.50	2.42	97	69 - 133	2.50	2.58	103	6	30
sec-Butylbenzene	135-98-8	ND	0.250	2.50	2.78	111	72 - 141	2.50	2.89	116	4	30
Styrene	100-42-5	ND	0.250	2.50	2.41	96	72 - 128	2.50	2.58	103	7	30
tert-Butyl methyl ether (MTBE)	1634-04-4	ND	0.250	2.50	2.60	104	69 - 126	2.50	2.84	114	9	30
tert-Butylbenzene	98-06-6	ND	0.250	2.50	2.71	108	72 - 136	2.50	2.82	113	4	30

GC/MS Volatiles QC Summary

Analytical Batch 606324	Client ID	MB606324		LCS606324				LCSD606324				
	GCAL ID	1664345		1664346				1664347				
	Sample Type	MB		LCS				LCSD				
	Prep Date	NA		NA				NA				
	Analysis Date	03/15/2017 11:30		03/15/2017 09:19				03/15/2017 09:42				
	Matrix	Solid		Solid				Solid				
EPA 8260B		Units Result	mg/kg LOQ	Spike Added	Result	%R	Control Limits%R	Spike Added	Result	%R	RPD	RPD Limit
Tetrachloroethene	127-18-4	ND	0.250	2.50	2.78	111	70 - 127	2.50	2.92	117	5	30
Toluene	108-88-3	ND	0.250	2.50	2.56	102	74 - 121	2.50	2.70	108	5	20
trans-1,2-Dichloroethene	156-60-5	ND	0.250	2.50	2.33	93	67 - 134	2.50	2.48	99	6	30
trans-1,3-Dichloropropene	10061-02-6	ND	0.250	2.50	2.22	89	72 - 126	2.50	2.43	97	9	30
trans-1,4-Dichloro-2-butene	110-57-6	ND	0.250	2.50	2.43	97	44 - 146	2.50	2.93	117	19	30
Trichloroethene	79-01-6	ND	0.250	2.50	2.39	96	78 - 127	2.50	2.51	100	5	20
Trichlorofluoromethane	75-69-4	ND	0.250	2.50	2.31	92	64 - 141	2.50	2.44	98	5	30
Trichlorotrifluoroethane	76-13-1	ND	0.250	2.50	2.22	89	66 - 139	2.50	2.25	90	1	30
Vinyl chloride	75-01-4	ND	0.250	2.50	2.25	90	67 - 131	2.50	2.35	94	4	30
Xylene (total)	1330-20-7	ND	0.750	7.50	7.33	98	71 - 129	7.50	7.72	103	5	30
Surrogate												
1,2-Dichloroethane-d4	17060-07-0	2.49	100	2.5	2.46	98	62 - 125	2.5	2.52	101	NA	NA
4-Bromofluorobenzene	460-00-4	2.51	100	2.5	2.63	105	62 - 127	2.5	2.66	106	NA	NA
Dibromofluoromethane	1868-53-7	2.37	95	2.5	2.45	98	65 - 130	2.5	2.51	100	NA	NA
Toluene d8	2037-26-5	2.56	102	2.5	2.53	101	71 - 132	2.5	2.54	102	NA	NA

Analytical Batch 606389	Client ID	MB606389		LCS606389				LCSD606389				
	GCAL ID	1664676		1664677				1664678				
	Sample Type	MB		LCS				LCSD				
	Prep Date	NA		NA				NA				
	Analysis Date	03/15/2017 21:44		03/15/2017 20:13				03/15/2017 20:36				
	Matrix	Water		Water				Water				
EPA 8260B		Units Result	ug/L LOQ	Spike Added	Result	%R	Control Limits%R	Spike Added	Result	%R	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	630-20-6	ND	5.00	50.0	54.1	108	75 - 124	50.0	56.2	112	4	30
1,1,1-Trichloroethane	71-55-6	ND	5.00	50.0	53.5	107	76 - 126	50.0	56.7	113	6	30
1,1,2,2-Tetrachloroethane	79-34-5	ND	5.00	50.0	45.3	91	70 - 122	50.0	48.4	97	7	30
1,1,2-Trichloroethane	79-00-5	ND	5.00	50.0	51.8	104	72 - 121	50.0	55.7	111	7	30
1,1-Dichloroethane	75-34-3	ND	5.00	50.0	51.4	103	74 - 127	50.0	54.6	109	6	30
1,1-Dichloroethene	75-35-4	ND	5.00	50.0	53.3	107	69 - 129	50.0	62.8	126	16	20
1,1-Dichloropropene	563-58-6	ND	5.00	50.0	48.1	96	72 - 131	50.0	51.1	102	6	30
1,2,3-Trichloropropane	96-18-4	ND	5.00	50.0	47.0	94	70 - 120	50.0	50.8	102	8	30
1,2,4-Trichlorobenzene	120-82-1	ND	5.00	50.0	47.7	95	61 - 135	50.0	51.0	102	7	30
1,2,4-Trimethylbenzene	95-63-6	ND	5.00	50.0	51.3	103	74 - 125	50.0	53.0	106	3	30
1,2-Dibromo-3-chloropropane	96-12-8	ND	5.00	50.0	48.7	97	57 - 121	50.0	52.9	106	8	30
1,2-Dibromoethane	106-93-4	ND	5.00	50.0	47.6	95	70 - 124	50.0	49.6	99	4	30
1,2-Dichlorobenzene	95-50-1	ND	5.00	50.0	51.4	103	71 - 126	50.0	54.5	109	6	30
1,2-Dichloroethane	107-06-2	ND	5.00	50.0	51.0	102	71 - 129	50.0	54.5	109	7	30
1,2-Dichloroethene(Total)	540-59-0	ND	10.0	100	93.5	94	74 - 128	100	99.6	100	6	30
1,2-Dichloropropane	78-87-5	ND	5.00	50.0	47.1	94	72 - 128	50.0	50.2	100	6	30
1,3,5-Trimethylbenzene	108-67-8	ND	5.00	50.0	56.1	112	71 - 132	50.0	58.6	117	4	30
1,3-Dichlorobenzene	541-73-1	ND	5.00	50.0	52.6	105	74 - 126	50.0	55.0	110	4	30
1,3-Dichloropropane	142-28-9	ND	5.00	50.0	52.3	105	74 - 122	50.0	54.8	110	5	30
1,4-Dichlorobenzene	106-46-7	ND	5.00	50.0	50.7	101	72 - 122	50.0	53.6	107	6	30
2,2-Dichloropropane	594-20-7	ND	5.00	50.0	51.3	103	77 - 124	50.0	53.4	107	4	30
2-Butanone	78-93-3	ND	5.00	50.0	42.7	85	58 - 137	50.0	47.2	94	10	30
2-Chlorotoluene	95-49-8	ND	5.00	50.0	50.6	101	72 - 127	50.0	52.8	106	4	30
2-Hexanone	591-78-6	ND	5.00	50.0	45.1	90	50 - 135	50.0	48.1	96	6	30
4-Chlorotoluene	106-43-4	ND	5.00	50.0	52.2	104	75 - 126	50.0	54.0	108	3	30
4-Isopropyltoluene	99-87-6	ND	5.00	50.0	52.3	105	71 - 129	50.0	53.6	107	2	30
4-Methyl-2-pentanone	108-10-1	ND	5.00	50.0	49.6	99	57 - 132	50.0	53.5	107	8	30
Acetone	67-64-1	ND	5.00	50.0	47.1	94	44 - 156	50.0	51.6	103	9	30
Benzene	71-43-2	ND	5.00	50.0	52.5	105	70 - 129	50.0	55.5	111	6	20
Bromobenzene	108-86-1	ND	5.00	50.0	48.4	97	71 - 120	50.0	51.0	102	5	30
Bromochloromethane	74-97-5	ND	5.00	50.0	50.1	100	76 - 130	50.0	53.6	107	7	30
Bromodichloromethane	75-27-4	ND	5.00	50.0	52.7	105	74 - 125	50.0	56.2	112	6	30
Bromoform	75-25-2	ND	5.00	50.0	51.4	103	64 - 122	50.0	55.8	112	8	30

GC/MS Volatiles QC Summary

Analytical Batch 606389	Client ID	MB606389		LCS606389				LCSD606389				
	GCAL ID	1664676		1664677				1664678				
	Sample Type	MB		LCS				LCSD				
	Prep Date	NA		NA				NA				
	Analysis Date	03/15/2017 21:44		03/15/2017 20:13				03/15/2017 20:36				
	Matrix	Water		Water				Water				
EPA 8260B		Units Result	ug/L LOQ	Spike Added	Result	%R	Control Limits%R	Spike Added	Result	%R	RPD	RPD Limit
Bromomethane	74-83-9	ND	5.00	50.0	40.0	80	47 - 138	50.0	44.9	90	12	30
Carbon disulfide	75-15-0	ND	5.00	50.0	56.1	112	69 - 136	50.0	61.4	123	9	30
Carbon tetrachloride	56-23-5	ND	5.00	50.0	49.5	99	76 - 128	50.0	52.0	104	5	30
Chlorobenzene	108-90-7	ND	5.00	50.0	53.2	106	74 - 123	50.0	54.5	109	2	20
Chloroethane	75-00-3	ND	5.00	50.0	40.0	80	62 - 141	50.0	42.9	86	7	30
Chloroform	67-66-3	ND	5.00	50.0	52.1	104	75 - 122	50.0	55.8	112	7	30
Chloromethane	74-87-3	ND	5.00	50.0	47.9	96	59 - 132	50.0	51.7	103	8	30
cis-1,2-Dichloroethene	156-59-2	ND	5.00	50.0	46.5	93	73 - 130	50.0	50.1	100	7	30
cis-1,3-Dichloropropene	10061-01-5	ND	5.00	50.0	46.8	94	71 - 132	50.0	49.9	100	6	30
Dibromochloromethane	124-48-1	ND	5.00	50.0	53.9	108	71 - 123	50.0	55.9	112	4	30
Dibromomethane	74-95-3	ND	5.00	50.0	46.9	94	72 - 129	50.0	50.7	101	8	30
Dichlorodifluoromethane	75-71-8	ND	5.00	50.0	52.6	105	58 - 140	50.0	54.6	109	4	30
Ethylbenzene	100-41-4	ND	5.00	50.0	55.1	110	74 - 126	50.0	55.2	110	0	30
Hexachlorobutadiene	87-68-3	ND	5.00	50.0	58.9	118	61 - 144	50.0	61.7	123	5	30
Isopropylbenzene (Cumene)	98-82-8	ND	5.00	50.0	52.0	104	71 - 125	50.0	52.9	106	2	30
m,p-Xylene	136777-61-2	ND	10.0	100	102	102	74 - 126	100	104	104	2	30
Methylene chloride	75-09-2	ND	5.00	50.0	49.9	100	68 - 132	50.0	52.6	105	5	30
Naphthalene	91-20-3	ND	5.00	50.0	43.6	87	57 - 138	50.0	49.5	99	13	35
n-Butylbenzene	104-51-8	ND	5.00	50.0	51.2	102	69 - 134	50.0	52.4	105	2	30
n-Propylbenzene	103-65-1	ND	5.00	50.0	52.8	106	75 - 129	50.0	53.8	108	2	30
o-Xylene	95-47-6	ND	5.00	50.0	50.0	100	73 - 130	50.0	51.6	103	3	30
sec-Butylbenzene	135-98-8	ND	5.00	50.0	55.5	111	70 - 136	50.0	56.3	113	1	30
Styrene	100-42-5	ND	5.00	50.0	48.8	98	71 - 127	50.0	50.9	102	4	30
tert-Butyl methyl ether (MTBE)	1634-04-4	ND	5.00	50.0	51.8	104	71 - 125	50.0	56.0	112	8	30
tert-Butylbenzene	98-06-6	ND	5.00	50.0	54.1	108	72 - 126	50.0	55.2	110	2	30
Tetrachloroethene	127-18-4	ND	5.00	50.0	58.1	116	68 - 128	50.0	59.3	119	2	30
Toluene	108-88-3	ND	5.00	50.0	51.8	104	72 - 120	50.0	53.8	108	4	20
trans-1,2-Dichloroethene	156-60-5	ND	5.00	50.0	47.0	94	69 - 132	50.0	49.5	99	5	30
trans-1,3-Dichloropropene	10061-02-6	ND	5.00	50.0	45.8	92	71 - 131	50.0	48.9	98	7	30
trans-1,4-Dichloro-2-butene	110-57-6	ND	5.00	50.0	49.6	99	56 - 132	50.0	55.6	111	11	30
Trichloroethene	79-01-6	ND	5.00	50.0	49.4	99	76 - 129	50.0	52.7	105	6	20
Trichlorofluoromethane	75-69-4	ND	5.00	50.0	52.1	104	72 - 136	50.0	50.1	100	4	30
Trichlorotrifluoroethane	76-13-1	ND	5.00	50.0	54.5	109	72 - 136	50.0	58.4	117	7	30
Vinyl chloride	75-01-4	ND	2.00	50.0	42.3	85	68 - 132	50.0	48.0	96	13	30
Xylene (total)	1330-20-7	ND	15.0	150	152	101	74 - 127	150	156	104	3	30
Surrogate												
1,2-Dichloroethane-d4	17060-07-0	47	94	50	50.6	101	71 - 127	50	51.1	102	NA	NA
4-Bromofluorobenzene	460-00-4	50.7	101	50	54.9	110	78 - 130	50	53.9	108	NA	NA
Dibromofluoromethane	1868-53-7	49.1	98	50	49.9	100	77 - 127	50	50.9	102	NA	NA
Toluene d8	2037-26-5	53	106	50	50.1	100	76 - 134	50	49.7	99	NA	NA

CHAIN OF CUSTODY RECORD

GCAL ANALYTICAL LABORATORIES, LLC
7979 Innovation Park Dr., Baton Rouge, LA 70820-7402
Phone: 225.769.4900 • Fax: 225.767.5717 • www.gcal.com

Client ID: 4912 - Clearwater Environmental Resources
SDG: 217031414
PM: SAB3

Report to:
Client: Clearwater Environmental
Address: 3870 PTree Ind Blvd
Duluth GA 30096
Contact: Jack Wintle
Phone: 678-491-4601
E-mail: jack.wintle@clearwaterenv.net

Bill to:
Client:
Address: Slc 340139
Contact: SAA
Phone:
E-mail:

P.O. Number
Project Name/Number: RAYLOC

Sampled By: Perry Frix

Analytical Requests & Method: VOCs via 8260B

GCAL use only:
Custody Seal used ☐ yes ☐ no intact ☐ yes ☐ no
Temperature °C 2.2 E29 JSCAM

☐ Dissolved Analysis Requested
☐ Field filtered
☐ Lab filtered

Matrix[1]	Date	Time (2400)	Comp	Grab	Sample Description	No Containers	VOCs via 8260B	Preservative
S	3/9	0924		X	PD-2 @ 10'	4	X	1
		0937		X	WD-2 @ 10'	4	X	2
		0847		X	WD-4 @ 10'	4	X	3
		0944		X	WD-8 @ 5'	4	X	4
		0912		X	WD-11 @ 10'	4	X	5
		0858		X	ADD-1 @ 6'	4	X	6
		0906		X	ADD-1 @ 10'	4	X	7
		0830		X	ADD-2 @ 5'	4	X	8
		0839		X	ADD-2 @ 10'	4	X	9
					TRIP BLANK			10

Air Bill No: 7786 1514 8301

Turn Around Time (Business Days): ☐ 24h* ☐ 48h* ☐ 3 days* ☐ 1 week* ☐ Standard (Per Contract/Quote)

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
	3/9/17	1525	Brad Luchini	3/9/17	1525
Brad Luchini	3/13/17	Time:	FedEx	3/13/17	Time:
FedEX	3.13.17	0955		3.13.17	0955

Note:

By submitting these samples, you agree to GCAL's terms and conditions contained in our most recent schedule of services.

[1]Matrix: W = water, S = solid, L = liquid, T = tissue

*Requires prior approval, rush charges may apply.

We cannot accept verbal changes. Please email written changes to your PM

WHITE: CLIENT FINAL REPORT - CANARY: CLIENT

SAMPLE RECEIVING CHECKLIST

217031414

SAMPLE DELIVERY GROUP 217031414	
Client PM SAB3 4912 - Clearwater Environmental Resources	**Transport Method** FED EX
Profile Number 259985	**Received By** Savage, Tiffany R
Line Item(s) 1 - VOC 2 - Soils	**Receive Date(s)** 03/14/17

CHECKLIST	YES	NO	NA
Samples received with proper thermal and chemical preservation?	☑	☐	☐
Radioactivity is <1600 cpm? If no, record cpm value in notes section.	☑	☐	☐
When used, were custody seals intact?	☑	☐	☐
COC relinquished and complete (including sample IDs, collect dates/times, and sampler name)?	☑	☐	☐
Short holds or RUSH samples received?	☐	☑	☐
All containers received in good condition and within hold time?	☑	☐	☐
All sample labels and containers received match the chain of custody?	☑	☐	☐
Preservation checked at receipt? Exceptions: VOC, Coliform, TOC, Oil and Grease, DOC	☐	☐	☑
Preservative added to any containers?	☐	☐	☑
VOC water containers received with headspace < 6mm?	☑	☐	☐
Received filtered sample volume for dissolved analysis?	☐	☐	☑
Trip blank present in all coolers containing VOC waters?	☑	☐	☐
Samples collected in containers provided by GCAL?	☑	☐	☐

COOLERS

Airbill	Thermometer ID: E29	Temp(°C)
778615148301		2.2

DISCREPANCIES

None

LAB PRESERVATIONS

None

NOTES

Revision 1.6

Page 1 of 1

APPENDIX B
DECEMBER 2016 GROUNDWATER LABORATORY REPORTS

NELAP CERTIFICATE NUMBER: 01955
DOD ELAP CERTIFICATE NUMBER: L14-243

ANALYTICAL RESULTS

PERFORMED BY

GCAL, LLC
7979 Innovation Park Dr.
Baton Rouge, LA 70820

Report Date 12/28/2016

GCAL Report 216122050

Project Rayloc

Deliver To	***Additional Recipients***
Jack Wintle Clearwater Env. Resources Peachtree Industrial blvd Duluth, GA 30096 678-491-4601	NONE

Laboratory Endorsement

Sample analysis was performed in accordance with approved methodologies provided by the Environmental Protection Agency or other recognized agencies. The samples and their corresponding extracts will be maintained for a period of 30 days unless otherwise arranged. Following this retention period the samples will be disposed in accordance with GCAL's Standard Operating Procedures.

Common Abbreviations that may be Utilized in this Report

ND	Indicates the result was Not Detected at the specified reporting limit
NO	Indicates the sample did not ignite when preliminary test performed for EPA Method 1030
DO	Indicates the result was Diluted Out
MI	Indicates the result was subject to Matrix Interference
TNTC	Indicates the result was Too Numerous To Count
SUBC	Indicates the analysis was Sub-Contracted
FLD	Indicates the analysis was performed in the Field
DL	Detection Limit
DL	Diluted analysis – when appended to Client Sample ID
LOD	Limit of Detection
LOQ	Limit of Quantitation
RE	Re-analysis
CF	HPLC or GC Confirmation
00:01	Reported as a time equivalent to 12:00 AM

Reporting Flags that may be Utilized in this Report

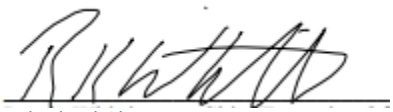
J or I	Indicates the result is between the MDL and LOQ
J	DOD flag on analyte in the parent sample for MS/MSD outside acceptance criteria
U	Indicates the compound was analyzed for but not detected
B or V	Indicates the analyte was detected in the associated Method Blank
Q	Indicates a non-compliant QC Result (See Q Flag Application Report)
*****	Indicates a non-compliant or not applicable QC recovery or RPD – see narrative
E	The result is estimated because it exceeded the instrument calibration range
E	Metals - % diference for the serial dilution is > 10%
P	RPD between primary and confirmation result is greater than 40

Sample receipt at GCAL is documented through the attached chain of custody. In accordance with NELAC, this report shall be reproduced only in full and with the written permission of GCAL. The results contained within this report relate only to the samples reported. The documented results are presented within this report.

This report pertains only to the samples listed in the Report Sample Summary and should be retained as a permanent record thereof. The results contained within this report are intended for the use of the client. Any unauthorized use of the information contained in this report is prohibited.

I certify that this data package is in compliance with The NELAC Institute (TNI) Standard 2009 and terms and conditions of the contract and Statement of Work both technically and for completeness, for other than the conditions in the case narrative. Release of the data contained in this hardcopy data package and in the computer readable data submitted has been authorized by the Quality Assurance Manager or his/her designee, as verified by the following signature.

Estimated uncertainty of measurement is available upon request. This report is in compliance with the DOD QSM as specified in the contract if applicable.



Authorized Signature
GCAL Report 216122050

Certifications

Certification	Certification Number
DOD ELAP	L14-243
Alabama	01955
Arkansas	12-060-0
Colorado	01955
Delaware	01955
Florida	E87854
Georgia	01955
Hawaii	01955
Idaho	01955
Illinois	200048
Indiana	01955
Kansas	E-10354
Kentucky	95
Louisiana	01955
Maryland	01955
Massachusetts	01955
Michigan	01955
Mississippi	01955
Missouri	01955
Montana	N/A
Nebraska	01955
New Mexico	01955
North Carolina	618
North Dakota	R-195
Oklahoma	9403
South Carolina	73006001
South Dakota	01955
Tennessee	01955
Texas	T104704178
Vermont	01955
Virginia	460215
USDA Soil Permit	P330-10-00117

Case Narrative

Client: Clearwater Environmental Resources **Report:** 216122050

Gulf Coast Analytical Laboratories received and analyzed the sample(s) listed on the Report Sample Summary page of this report. Receipt of the sample(s) is documented by the attached chain of custody. This applies only to the sample(s) listed in this report. No sample integrity or quality control exceptions were identified unless noted below.

VOLATILES MASS SPECTROMETRY

In the EPA 8260B analysis, samples 21612205004 (MW-17@30'), 21612205006 (MW-20@60'), 21612205007 (MW-21@60'), 21612205008 (MW-22@60'), 21612205009 (MW-23@60') and 21612205011 (PT-3@60') had to be diluted due to the presence of non-target background. This dilution is reflected in the elevated detection limits.

In the EPA 8260B analysis, samples 21612205002 (MW-12@60'), 21612205010 (MW-24@30'), 21612205004 (MW-17@30'), 21612205006 (MW-20@60'), 21612205007 (MW-21@60'), 21612205008 (MW-22@60') and 21612205009 (MW-23@60') had to be diluted to bracket the concentration of target compounds within the calibration range of the instrument. The dilution is reflected in elevated detection limits.

In the EPA 8260B analysis for analytical batch 601529, the LCS and/or LCSD recoveries are above the upper control limit for 2-Hexanone. This compound was not detected in the associated samples.

Sample Summary

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21612205001	MW-7@30'	Water	12/16/2016 10:54	12/20/2016 11:05
21612205002	MW-12@60'	Water	12/15/2016 11:25	12/20/2016 11:05
21612205003	MW-15@30'	Water	12/16/2016 10:06	12/20/2016 11:05
21612205004	MW-17@30'	Water	12/15/2016 14:05	12/20/2016 11:05
21612205005	MW-19@30'	Water	12/15/2016 14:37	12/20/2016 11:05
21612205006	MW-20@60'	Water	12/15/2016 10:07	12/20/2016 11:05
21612205007	MW-21@60'	Water	12/16/2016 13:29	12/20/2016 11:05
21612205008	MW-22@60'	Water	12/16/2016 12:37	12/20/2016 11:05
21612205009	MW-23@60'	Water	12/16/2016 11:53	12/20/2016 11:05
21612205010	MW-24@30'	Water	12/15/2016 12:08	12/20/2016 11:05
21612205011	PT-3@60'	Water	12/15/2016 09:19	12/20/2016 11:05

Summary of Compounds Detected

MW-7@30'

Collect Date 12/16/2016 10:54 **GCAL ID** 21612205001
Receive Date 12/20/2016 11:05 **Matrix** Water

EPA 8260B

CAS#	Parameter	Result	LOQ	Units
540-59-0	1,2-Dichloroethene(Total)	16.2	10.0	ug/L
156-59-2	cis-1,2-Dichloroethene	16.2	5.00	ug/L
127-18-4	Tetrachloroethene	42.0	5.00	ug/L
79-01-6	Trichloroethene	9.85	5.00	ug/L

MW-12@60'

Collect Date 12/15/2016 11:25 **GCAL ID** 21612205002
Receive Date 12/20/2016 11:05 **Matrix** Water

EPA 8260B

CAS#	Parameter	Result	LOQ	Units
540-59-0	1,2-Dichloroethene(Total)	25.1	10.0	ug/L
156-59-2	cis-1,2-Dichloroethene	24.2	5.00	ug/L
127-18-4	Tetrachloroethene	327	25.0	ug/L
79-01-6	Trichloroethene	16.4	5.00	ug/L

MW-15@30'

Collect Date 12/16/2016 10:06 **GCAL ID** 21612205003
Receive Date 12/20/2016 11:05 **Matrix** Water

EPA 8260B

CAS#	Parameter	Result	LOQ	Units
540-59-0	1,2-Dichloroethene(Total)	132	10.0	ug/L
156-59-2	cis-1,2-Dichloroethene	132	5.00	ug/L
75-01-4	Vinyl chloride	147	2.00	ug/L

MW-17@30'

Collect Date 12/15/2016 14:05 **GCAL ID** 21612205004
Receive Date 12/20/2016 11:05 **Matrix** Water

EPA 8260B

CAS#	Parameter	Result	LOQ	Units
540-59-0	1,2-Dichloroethene(Total)	401	20.0	ug/L
156-59-2	cis-1,2-Dichloroethene	399	10.0	ug/L
127-18-4	Tetrachloroethene	920	100	ug/L

Summary of Compounds Detected

MW-17@30'

Collect Date 12/15/2016 14:05 **GCAL ID** 21612205004
Receive Date 12/20/2016 11:05 **Matrix** Water

EPA 8260B (Continued)

CAS#	Parameter	Result	LOQ	Units
79-01-6	Trichloroethene	172	10.0	ug/L

MW-19@30'

Collect Date 12/15/2016 14:37 **GCAL ID** 21612205005
Receive Date 12/20/2016 11:05 **Matrix** Water

EPA 8260B

CAS#	Parameter	Result	LOQ	Units
540-59-0	1,2-Dichloroethene(Total)	59.7	10.0	ug/L
156-59-2	cis-1,2-Dichloroethene	59.7	5.00	ug/L
75-01-4	Vinyl chloride	9.45	2.00	ug/L

MW-20@60'

Collect Date 12/15/2016 10:07 **GCAL ID** 21612205006
Receive Date 12/20/2016 11:05 **Matrix** Water

EPA 8260B

CAS#	Parameter	Result	LOQ	Units
540-59-0	1,2-Dichloroethene(Total)	75.0	20.0	ug/L
156-59-2	cis-1,2-Dichloroethene	72.3	10.0	ug/L
127-18-4	Tetrachloroethene	1230	100	ug/L
79-01-6	Trichloroethene	102	10.0	ug/L

MW-21@60'

Collect Date 12/16/2016 13:29 **GCAL ID** 21612205007
Receive Date 12/20/2016 11:05 **Matrix** Water

EPA 8260B

CAS#	Parameter	Result	LOQ	Units
127-18-4	Tetrachloroethene	1110	250	ug/L

Summary of Compounds Detected

MW-22@60'

Collect Date 12/16/2016 12:37 **GCAL ID** 21612205008
Receive Date 12/20/2016 11:05 **Matrix** Water

EPA 8260B

CAS#	Parameter	Result	LOQ	Units
540-59-0	1,2-Dichloroethene(Total)	491	50.0	ug/L
156-59-2	cis-1,2-Dichloroethene	491	25.0	ug/L
127-18-4	Tetrachloroethene	1580	250	ug/L
79-01-6	Trichloroethene	140	25.0	ug/L

MW-23@60'

Collect Date 12/16/2016 11:53 **GCAL ID** 21612205009
Receive Date 12/20/2016 11:05 **Matrix** Water

EPA 8260B

CAS#	Parameter	Result	LOQ	Units
540-59-0	1,2-Dichloroethene(Total)	1780	500	ug/L
156-59-2	cis-1,2-Dichloroethene	1780	250	ug/L
127-18-4	Tetrachloroethene	1670	250	ug/L
79-01-6	Trichloroethene	397	25.0	ug/L

MW-24@30'

Collect Date 12/15/2016 12:08 **GCAL ID** 21612205010
Receive Date 12/20/2016 11:05 **Matrix** Water

EPA 8260B

CAS#	Parameter	Result	LOQ	Units
540-59-0	1,2-Dichloroethene(Total)	310	10.0	ug/L
156-59-2	cis-1,2-Dichloroethene	271	25.0	ug/L
127-18-4	Tetrachloroethene	200	25.0	ug/L
79-01-6	Trichloroethene	56.8	5.00	ug/L

PT-3@60'

Collect Date 12/15/2016 09:19 **GCAL ID** 21612205011
Receive Date 12/20/2016 11:05 **Matrix** Water

EPA 8260B

CAS#	Parameter	Result	LOQ	Units
540-59-0	1,2-Dichloroethene(Total)	484	200	ug/L
156-59-2	cis-1,2-Dichloroethene	473	100	ug/L
127-18-4	Tetrachloroethene	11300	1000	ug/L

Summary of Compounds Detected

PT-3@60'	**Collect Date**	12/15/2016 09:19	**GCAL ID**	21612205011
	Receive Date	12/20/2016 11:05	**Matrix**	Water

EPA 8260B (Continued)

CAS#	Parameter	Result	LOQ	Units
79-01-6	Trichloroethene	742	100	ug/L

Sample Results

MW-7@30'	**Collect Date**	12/16/2016 10:54	**GCAL ID**	21612205001
	Receive Date	12/20/2016 11:05	**Matrix**	Water

EPA 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	1	12/24/2016 01:01	JCK	601473

CAS#	Parameter	Result	LOQ	Units
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.00	ug/L
71-55-6	1,1,1-Trichloroethane	ND	5.00	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.00	ug/L
79-00-5	1,1,2-Trichloroethane	ND	5.00	ug/L
75-34-3	1,1-Dichloroethane	ND	5.00	ug/L
75-35-4	1,1-Dichloroethene	ND	5.00	ug/L
563-58-6	1,1-Dichloropropene	ND	5.00	ug/L
96-18-4	1,2,3-Trichloropropane	ND	5.00	ug/L
120-82-1	1,2,4-Trichlorobenzene	ND	5.00	ug/L
95-63-6	1,2,4-Trimethylbenzene	ND	5.00	ug/L
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.00	ug/L
106-93-4	1,2-Dibromoethane	ND	5.00	ug/L
95-50-1	1,2-Dichlorobenzene	ND	5.00	ug/L
107-06-2	1,2-Dichloroethane	ND	5.00	ug/L
540-59-0	**1,2-Dichloroethene(Total)**	**16.2**	**10.0**	**ug/L**
78-87-5	1,2-Dichloropropane	ND	5.00	ug/L
108-67-8	1,3,5-Trimethylbenzene	ND	5.00	ug/L
541-73-1	1,3-Dichlorobenzene	ND	5.00	ug/L
142-28-9	1,3-Dichloropropane	ND	5.00	ug/L
106-46-7	1,4-Dichlorobenzene	ND	5.00	ug/L
594-20-7	2,2-Dichloropropane	ND	5.00	ug/L
78-93-3	2-Butanone	ND	5.00	ug/L
95-49-8	2-Chlorotoluene	ND	5.00	ug/L
591-78-6	2-Hexanone	ND	5.00	ug/L
106-43-4	4-Chlorotoluene	ND	5.00	ug/L
99-87-6	4-Isopropyltoluene	ND	5.00	ug/L
108-10-1	4-Methyl-2-pentanone	ND	5.00	ug/L
67-64-1	Acetone	ND	5.00	ug/L
71-43-2	Benzene	ND	5.00	ug/L
108-86-1	Bromobenzene	ND	5.00	ug/L
74-97-5	Bromochloromethane	ND	5.00	ug/L
75-27-4	Bromodichloromethane	ND	5.00	ug/L
75-25-2	Bromoform	ND	5.00	ug/L
74-83-9	Bromomethane	ND	5.00	ug/L
75-15-0	Carbon disulfide	ND	5.00	ug/L
56-23-5	Carbon tetrachloride	ND	5.00	ug/L
108-90-7	Chlorobenzene	ND	5.00	ug/L
75-00-3	Chloroethane	ND	5.00	ug/L
67-66-3	Chloroform	ND	5.00	ug/L
74-87-3	Chloromethane	ND	5.00	ug/L
156-59-2	**cis-1,2-Dichloroethene**	**16.2**	**5.00**	**ug/L**
10061-01-5	cis-1,3-Dichloropropene	ND	5.00	ug/L
124-48-1	Dibromochloromethane	ND	5.00	ug/L
74-95-3	Dibromomethane	ND	5.00	ug/L
75-71-8	Dichlorodifluoromethane	ND	5.00	ug/L
100-41-4	Ethylbenzene	ND	5.00	ug/L
87-68-3	Hexachlorobutadiene	ND	5.00	ug/L

Sample Results

MW-7@30'

Collect Date	12/16/2016 10:54	**GCAL ID**	21612205001
Receive Date	12/20/2016 11:05	**Matrix**	Water

EPA 8260B (Continued)

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	1	12/24/2016 01:01	JCK	601473

CAS#	Parameter	Result	LOQ	Units
98-82-8	Isopropylbenzene (Cumene)	ND	5.00	ug/L
136777-61-2	m,p-Xylene	ND	10.0	ug/L
75-09-2	Methylene chloride	ND	5.00	ug/L
91-20-3	Naphthalene	ND	5.00	ug/L
104-51-8	n-Butylbenzene	ND	5.00	ug/L
103-65-1	n-Propylbenzene	ND	5.00	ug/L
95-47-6	o-Xylene	ND	5.00	ug/L
135-98-8	sec-Butylbenzene	ND	5.00	ug/L
100-42-5	Styrene	ND	5.00	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	ND	5.00	ug/L
98-06-6	tert-Butylbenzene	ND	5.00	ug/L
127-18-4	**Tetrachloroethene**	**42.0**	**5.00**	**ug/L**
108-88-3	Toluene	ND	5.00	ug/L
156-60-5	trans-1,2-Dichloroethene	ND	5.00	ug/L
10061-02-6	trans-1,3-Dichloropropene	ND	5.00	ug/L
110-57-6	trans-1,4-Dichloro-2-butene	ND	5.00	ug/L
79-01-6	**Trichloroethene**	**9.85**	**5.00**	**ug/L**
75-69-4	Trichlorofluoromethane	ND	5.00	ug/L
76-13-1	Trichlorotrifluoroethane	ND	5.00	ug/L
75-01-4	Vinyl chloride	ND	2.00	ug/L
1330-20-7	Xylene (total)	ND	15.0	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	52	ug/L	104	78 - 130
1868-53-7	Dibromofluoromethane	50	51.1	ug/L	102	77 - 127
2037-26-5	Toluene d8	50	51.8	ug/L	104	76 - 134
17060-07-0	1,2-Dichloroethane-d4	50	50.6	ug/L	101	71 - 127

MW-12@60'

Collect Date	12/15/2016 11:25	**GCAL ID**	21612205002
Receive Date	12/20/2016 11:05	**Matrix**	Water

EPA 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	1	12/24/2016 02:35	JCK	601473

CAS#	Parameter	Result	LOQ	Units
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.00	ug/L
71-55-6	1,1,1-Trichloroethane	ND	5.00	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.00	ug/L
79-00-5	1,1,2-Trichloroethane	ND	5.00	ug/L
75-34-3	1,1-Dichloroethane	ND	5.00	ug/L

Sample Results

MW-12@60'	**Collect Date**	12/15/2016 11:25	**GCAL ID**	21612205002
	Receive Date	12/20/2016 11:05	**Matrix**	Water

EPA 8260B (Continued)

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	1	12/24/2016 02:35	JCK	601473

CAS#	Parameter	Result	LOQ	Units
75-35-4	1,1-Dichloroethene	ND	5.00	ug/L
563-58-6	1,1-Dichloropropene	ND	5.00	ug/L
96-18-4	1,2,3-Trichloropropane	ND	5.00	ug/L
120-82-1	1,2,4-Trichlorobenzene	ND	5.00	ug/L
95-63-6	1,2,4-Trimethylbenzene	ND	5.00	ug/L
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.00	ug/L
106-93-4	1,2-Dibromoethane	ND	5.00	ug/L
95-50-1	1,2-Dichlorobenzene	ND	5.00	ug/L
107-06-2	1,2-Dichloroethane	ND	5.00	ug/L
540-59-0	**1,2-Dichloroethene(Total)**	**25.1**	**10.0**	**ug/L**
78-87-5	1,2-Dichloropropane	ND	5.00	ug/L
108-67-8	1,3,5-Trimethylbenzene	ND	5.00	ug/L
541-73-1	1,3-Dichlorobenzene	ND	5.00	ug/L
142-28-9	1,3-Dichloropropane	ND	5.00	ug/L
106-46-7	1,4-Dichlorobenzene	ND	5.00	ug/L
594-20-7	2,2-Dichloropropane	ND	5.00	ug/L
78-93-3	2-Butanone	ND	5.00	ug/L
95-49-8	2-Chlorotoluene	ND	5.00	ug/L
591-78-6	2-Hexanone	ND	5.00	ug/L
106-43-4	4-Chlorotoluene	ND	5.00	ug/L
99-87-6	4-Isopropyltoluene	ND	5.00	ug/L
108-10-1	4-Methyl-2-pentanone	ND	5.00	ug/L
67-64-1	Acetone	ND	5.00	ug/L
71-43-2	Benzene	ND	5.00	ug/L
108-86-1	Bromobenzene	ND	5.00	ug/L
74-97-5	Bromochloromethane	ND	5.00	ug/L
75-27-4	Bromodichloromethane	ND	5.00	ug/L
75-25-2	Bromoform	ND	5.00	ug/L
74-83-9	Bromomethane	ND	5.00	ug/L
75-15-0	Carbon disulfide	ND	5.00	ug/L
56-23-5	Carbon tetrachloride	ND	5.00	ug/L
108-90-7	Chlorobenzene	ND	5.00	ug/L
75-00-3	Chloroethane	ND	5.00	ug/L
67-66-3	Chloroform	ND	5.00	ug/L
74-87-3	Chloromethane	ND	5.00	ug/L
156-59-2	**cis-1,2-Dichloroethene**	**24.2**	**5.00**	**ug/L**
10061-01-5	cis-1,3-Dichloropropene	ND	5.00	ug/L
124-48-1	Dibromochloromethane	ND	5.00	ug/L
74-95-3	Dibromomethane	ND	5.00	ug/L
75-71-8	Dichlorodifluoromethane	ND	5.00	ug/L
100-41-4	Ethylbenzene	ND	5.00	ug/L
87-68-3	Hexachlorobutadiene	ND	5.00	ug/L
98-82-8	Isopropylbenzene (Cumene)	ND	5.00	ug/L
136777-61-2	m,p-Xylene	ND	10.0	ug/L
75-09-2	Methylene chloride	ND	5.00	ug/L
91-20-3	Naphthalene	ND	5.00	ug/L
104-51-8	n-Butylbenzene	ND	5.00	ug/L

Sample Results

MW-12@60'	**Collect Date**	12/15/2016 11:25	**GCAL ID**	21612205002
	Receive Date	12/20/2016 11:05	**Matrix**	Water

EPA 8260B (Continued)

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	1	12/24/2016 02:35	JCK	601473

CAS#	Parameter	Result	LOQ	Units
103-65-1	n-Propylbenzene	ND	5.00	ug/L
95-47-6	o-Xylene	ND	5.00	ug/L
135-98-8	sec-Butylbenzene	ND	5.00	ug/L
100-42-5	Styrene	ND	5.00	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	ND	5.00	ug/L
98-06-6	tert-Butylbenzene	ND	5.00	ug/L
108-88-3	Toluene	ND	5.00	ug/L
156-60-5	trans-1,2-Dichloroethene	ND	5.00	ug/L
10061-02-6	trans-1,3-Dichloropropene	ND	5.00	ug/L
110-57-6	trans-1,4-Dichloro-2-butene	ND	5.00	ug/L
79-01-6	**Trichloroethene**	**16.4**	**5.00**	**ug/L**
75-69-4	Trichlorofluoromethane	ND	5.00	ug/L
76-13-1	Trichlorotrifluoroethane	ND	5.00	ug/L
75-01-4	Vinyl chloride	ND	2.00	ug/L
1330-20-7	Xylene (total)	ND	15.0	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	51.1	ug/L	102	78 - 130
1868-53-7	Dibromofluoromethane	50	51.5	ug/L	103	77 - 127
2037-26-5	Toluene d8	50	50.9	ug/L	102	76 - 134
17060-07-0	1,2-Dichloroethane-d4	50	51	ug/L	102	71 - 127

EPA 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	5	12/24/2016 02:12	JCK	601473

CAS#	Parameter	Result	LOQ	Units
127-18-4	**Tetrachloroethene**	**327**	**25.0**	**ug/L**

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	250	254	ug/L	102	78 - 130
1868-53-7	Dibromofluoromethane	250	258	ug/L	103	77 - 127
2037-26-5	Toluene d8	250	261	ug/L	104	76 - 134
17060-07-0	1,2-Dichloroethane-d4	250	259	ug/L	104	71 - 127

Sample Results

MW-15@30'	**Collect Date**	12/16/2016 10:06	**GCAL ID**	21612205003
	Receive Date	12/20/2016 11:05	**Matrix**	Water

EPA 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	1	12/24/2016 01:24	JCK	601473

CAS#	Parameter	Result	LOQ	Units
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.00	ug/L
71-55-6	1,1,1-Trichloroethane	ND	5.00	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.00	ug/L
79-00-5	1,1,2-Trichloroethane	ND	5.00	ug/L
75-34-3	1,1-Dichloroethane	ND	5.00	ug/L
75-35-4	1,1-Dichloroethene	ND	5.00	ug/L
563-58-6	1,1-Dichloropropene	ND	5.00	ug/L
96-18-4	1,2,3-Trichloropropane	ND	5.00	ug/L
120-82-1	1,2,4-Trichlorobenzene	ND	5.00	ug/L
95-63-6	1,2,4-Trimethylbenzene	ND	5.00	ug/L
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.00	ug/L
106-93-4	1,2-Dibromoethane	ND	5.00	ug/L
95-50-1	1,2-Dichlorobenzene	ND	5.00	ug/L
107-06-2	1,2-Dichloroethane	ND	5.00	ug/L
540-59-0	**1,2-Dichloroethene(Total)**	**132**	**10.0**	**ug/L**
78-87-5	1,2-Dichloropropane	ND	5.00	ug/L
108-67-8	1,3,5-Trimethylbenzene	ND	5.00	ug/L
541-73-1	1,3-Dichlorobenzene	ND	5.00	ug/L
142-28-9	1,3-Dichloropropane	ND	5.00	ug/L
106-46-7	1,4-Dichlorobenzene	ND	5.00	ug/L
594-20-7	2,2-Dichloropropane	ND	5.00	ug/L
78-93-3	2-Butanone	ND	5.00	ug/L
95-49-8	2-Chlorotoluene	ND	5.00	ug/L
591-78-6	2-Hexanone	ND	5.00	ug/L
106-43-4	4-Chlorotoluene	ND	5.00	ug/L
99-87-6	4-Isopropyltoluene	ND	5.00	ug/L
108-10-1	4-Methyl-2-pentanone	ND	5.00	ug/L
67-64-1	Acetone	ND	5.00	ug/L
71-43-2	Benzene	ND	5.00	ug/L
108-86-1	Bromobenzene	ND	5.00	ug/L
74-97-5	Bromochloromethane	ND	5.00	ug/L
75-27-4	Bromodichloromethane	ND	5.00	ug/L
75-25-2	Bromoform	ND	5.00	ug/L
74-83-9	Bromomethane	ND	5.00	ug/L
75-15-0	Carbon disulfide	ND	5.00	ug/L
56-23-5	Carbon tetrachloride	ND	5.00	ug/L
108-90-7	Chlorobenzene	ND	5.00	ug/L
75-00-3	Chloroethane	ND	5.00	ug/L
67-66-3	Chloroform	ND	5.00	ug/L
74-87-3	Chloromethane	ND	5.00	ug/L
156-59-2	**cis-1,2-Dichloroethene**	**132**	**5.00**	**ug/L**
10061-01-5	cis-1,3-Dichloropropene	ND	5.00	ug/L
124-48-1	Dibromochloromethane	ND	5.00	ug/L
74-95-3	Dibromomethane	ND	5.00	ug/L
75-71-8	Dichlorodifluoromethane	ND	5.00	ug/L
100-41-4	Ethylbenzene	ND	5.00	ug/L
87-68-3	Hexachlorobutadiene	ND	5.00	ug/L

Sample Results

MW-15@30'

Collect Date	12/16/2016 10:06	**GCAL ID**	21612205003
Receive Date	12/20/2016 11:05	**Matrix**	Water

EPA 8260B (Continued)

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	1	12/24/2016 01:24	JCK	601473

CAS#	Parameter	Result	LOQ	Units
98-82-8	Isopropylbenzene (Cumene)	ND	5.00	ug/L
136777-61-2	m,p-Xylene	ND	10.0	ug/L
75-09-2	Methylene chloride	ND	5.00	ug/L
91-20-3	Naphthalene	ND	5.00	ug/L
104-51-8	n-Butylbenzene	ND	5.00	ug/L
103-65-1	n-Propylbenzene	ND	5.00	ug/L
95-47-6	o-Xylene	ND	5.00	ug/L
135-98-8	sec-Butylbenzene	ND	5.00	ug/L
100-42-5	Styrene	ND	5.00	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	ND	5.00	ug/L
98-06-6	tert-Butylbenzene	ND	5.00	ug/L
127-18-4	Tetrachloroethene	ND	5.00	ug/L
108-88-3	Toluene	ND	5.00	ug/L
156-60-5	trans-1,2-Dichloroethene	ND	5.00	ug/L
10061-02-6	trans-1,3-Dichloropropene	ND	5.00	ug/L
110-57-6	trans-1,4-Dichloro-2-butene	ND	5.00	ug/L
79-01-6	Trichloroethene	ND	5.00	ug/L
75-69-4	Trichlorofluoromethane	ND	5.00	ug/L
76-13-1	Trichlorotrifluoroethane	ND	5.00	ug/L
75-01-4	**Vinyl chloride**	**147**	**2.00**	**ug/L**
1330-20-7	Xylene (total)	ND	15.0	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	52.4	ug/L	105	78 - 130
1868-53-7	Dibromofluoromethane	50	51	ug/L	102	77 - 127
2037-26-5	Toluene d8	50	52.6	ug/L	105	76 - 134
17060-07-0	1,2-Dichloroethane-d4	50	50.5	ug/L	101	71 - 127

MW-17@30'

Collect Date	12/15/2016 14:05	**GCAL ID**	21612205004
Receive Date	12/20/2016 11:05	**Matrix**	Water

EPA 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	2	12/24/2016 06:04	JCK	601473

CAS#	Parameter	Result	LOQ	Units
630-20-6	1,1,1,2-Tetrachloroethane	ND	10.0	ug/L
71-55-6	1,1,1-Trichloroethane	ND	10.0	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	ND	10.0	ug/L
79-00-5	1,1,2-Trichloroethane	ND	10.0	ug/L
75-34-3	1,1-Dichloroethane	ND	10.0	ug/L

Sample Results

MW-17@30'	**Collect Date**	12/15/2016 14:05	**GCAL ID**	21612205004
	Receive Date	12/20/2016 11:05	**Matrix**	Water

EPA 8260B (Continued)

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	2	12/24/2016 06:04	JCK	601473

CAS#	Parameter	Result	LOQ	Units
75-35-4	1,1-Dichloroethene	ND	10.0	ug/L
563-58-6	1,1-Dichloropropene	ND	10.0	ug/L
96-18-4	1,2,3-Trichloropropane	ND	10.0	ug/L
120-82-1	1,2,4-Trichlorobenzene	ND	10.0	ug/L
95-63-6	1,2,4-Trimethylbenzene	ND	10.0	ug/L
96-12-8	1,2-Dibromo-3-chloropropane	ND	10.0	ug/L
106-93-4	1,2-Dibromoethane	ND	10.0	ug/L
95-50-1	1,2-Dichlorobenzene	ND	10.0	ug/L
107-06-2	1,2-Dichloroethane	ND	10.0	ug/L
540-59-0	**1,2-Dichloroethene(Total)**	**401**	**20.0**	**ug/L**
78-87-5	1,2-Dichloropropane	ND	10.0	ug/L
108-67-8	1,3,5-Trimethylbenzene	ND	10.0	ug/L
541-73-1	1,3-Dichlorobenzene	ND	10.0	ug/L
142-28-9	1,3-Dichloropropane	ND	10.0	ug/L
106-46-7	1,4-Dichlorobenzene	ND	10.0	ug/L
594-20-7	2,2-Dichloropropane	ND	10.0	ug/L
78-93-3	2-Butanone	ND	10.0	ug/L
95-49-8	2-Chlorotoluene	ND	10.0	ug/L
591-78-6	2-Hexanone	ND	10.0	ug/L
106-43-4	4-Chlorotoluene	ND	10.0	ug/L
99-87-6	4-Isopropyltoluene	ND	10.0	ug/L
108-10-1	4-Methyl-2-pentanone	ND	10.0	ug/L
67-64-1	Acetone	ND	10.0	ug/L
71-43-2	Benzene	ND	10.0	ug/L
108-86-1	Bromobenzene	ND	10.0	ug/L
74-97-5	Bromochloromethane	ND	10.0	ug/L
75-27-4	Bromodichloromethane	ND	10.0	ug/L
75-25-2	Bromoform	ND	10.0	ug/L
74-83-9	Bromomethane	ND	10.0	ug/L
75-15-0	Carbon disulfide	ND	10.0	ug/L
56-23-5	Carbon tetrachloride	ND	10.0	ug/L
108-90-7	Chlorobenzene	ND	10.0	ug/L
75-00-3	Chloroethane	ND	10.0	ug/L
67-66-3	Chloroform	ND	10.0	ug/L
74-87-3	Chloromethane	ND	10.0	ug/L
156-59-2	**cis-1,2-Dichloroethene**	**399**	**10.0**	**ug/L**
10061-01-5	cis-1,3-Dichloropropene	ND	10.0	ug/L
124-48-1	Dibromochloromethane	ND	10.0	ug/L
74-95-3	Dibromomethane	ND	10.0	ug/L
75-71-8	Dichlorodifluoromethane	ND	10.0	ug/L
100-41-4	Ethylbenzene	ND	10.0	ug/L
87-68-3	Hexachlorobutadiene	ND	10.0	ug/L
98-82-8	Isopropylbenzene (Cumene)	ND	10.0	ug/L
136777-61-2	m,p-Xylene	ND	20.0	ug/L
75-09-2	Methylene chloride	ND	10.0	ug/L
91-20-3	Naphthalene	ND	10.0	ug/L
104-51-8	n-Butylbenzene	ND	10.0	ug/L

Sample Results

MW-17@30'	**Collect Date**	12/15/2016 14:05	**GCAL ID**	21612205004
	Receive Date	12/20/2016 11:05	**Matrix**	Water

EPA 8260B (Continued)

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	2	12/24/2016 06:04	JCK	601473

CAS#	Parameter	Result	LOQ	Units
103-65-1	n-Propylbenzene	ND	10.0	ug/L
95-47-6	o-Xylene	ND	10.0	ug/L
135-98-8	sec-Butylbenzene	ND	10.0	ug/L
100-42-5	Styrene	ND	10.0	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	ND	10.0	ug/L
98-06-6	tert-Butylbenzene	ND	10.0	ug/L
108-88-3	Toluene	ND	10.0	ug/L
156-60-5	trans-1,2-Dichloroethene	ND	10.0	ug/L
10061-02-6	trans-1,3-Dichloropropene	ND	10.0	ug/L
110-57-6	trans-1,4-Dichloro-2-butene	ND	10.0	ug/L
79-01-6	**Trichloroethene**	**172**	**10.0**	**ug/L**
75-69-4	Trichlorofluoromethane	ND	10.0	ug/L
76-13-1	Trichlorotrifluoroethane	ND	10.0	ug/L
75-01-4	Vinyl chloride	ND	4.00	ug/L
1330-20-7	Xylene (total)	ND	30.0	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	100	102	ug/L	102	78 - 130
1868-53-7	Dibromofluoromethane	100	104	ug/L	104	77 - 127
2037-26-5	Toluene d8	100	103	ug/L	103	76 - 134
17060-07-0	1,2-Dichloroethane-d4	100	103	ug/L	103	71 - 127

EPA 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	20	12/24/2016 04:10	JCK	601473

CAS#	Parameter	Result	LOQ	Units
127-18-4	**Tetrachloroethene**	**920**	**100**	**ug/L**

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	1000	1010	ug/L	101	78 - 130
1868-53-7	Dibromofluoromethane	1000	1030	ug/L	103	77 - 127
2037-26-5	Toluene d8	1000	1020	ug/L	102	76 - 134
17060-07-0	1,2-Dichloroethane-d4	1000	1040	ug/L	104	71 - 127

Sample Results

MW-19@30'	**Collect Date**	12/15/2016 14:37	**GCAL ID**	21612205005
	Receive Date	12/20/2016 11:05	**Matrix**	Water

EPA 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	1	12/24/2016 01:47	JCK	601473

CAS#	Parameter	Result	LOQ	Units
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.00	ug/L
71-55-6	1,1,1-Trichloroethane	ND	5.00	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.00	ug/L
79-00-5	1,1,2-Trichloroethane	ND	5.00	ug/L
75-34-3	1,1-Dichloroethane	ND	5.00	ug/L
75-35-4	1,1-Dichloroethene	ND	5.00	ug/L
563-58-6	1,1-Dichloropropene	ND	5.00	ug/L
96-18-4	1,2,3-Trichloropropane	ND	5.00	ug/L
120-82-1	1,2,4-Trichlorobenzene	ND	5.00	ug/L
95-63-6	1,2,4-Trimethylbenzene	ND	5.00	ug/L
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.00	ug/L
106-93-4	1,2-Dibromoethane	ND	5.00	ug/L
95-50-1	1,2-Dichlorobenzene	ND	5.00	ug/L
107-06-2	1,2-Dichloroethane	ND	5.00	ug/L
540-59-0	**1,2-Dichloroethene(Total)**	**59.7**	**10.0**	**ug/L**
78-87-5	1,2-Dichloropropane	ND	5.00	ug/L
108-67-8	1,3,5-Trimethylbenzene	ND	5.00	ug/L
541-73-1	1,3-Dichlorobenzene	ND	5.00	ug/L
142-28-9	1,3-Dichloropropane	ND	5.00	ug/L
106-46-7	1,4-Dichlorobenzene	ND	5.00	ug/L
594-20-7	2,2-Dichloropropane	ND	5.00	ug/L
78-93-3	2-Butanone	ND	5.00	ug/L
95-49-8	2-Chlorotoluene	ND	5.00	ug/L
591-78-6	2-Hexanone	ND	5.00	ug/L
106-43-4	4-Chlorotoluene	ND	5.00	ug/L
99-87-6	4-Isopropyltoluene	ND	5.00	ug/L
108-10-1	4-Methyl-2-pentanone	ND	5.00	ug/L
67-64-1	Acetone	ND	5.00	ug/L
71-43-2	Benzene	ND	5.00	ug/L
108-86-1	Bromobenzene	ND	5.00	ug/L
74-97-5	Bromochloromethane	ND	5.00	ug/L
75-27-4	Bromodichloromethane	ND	5.00	ug/L
75-25-2	Bromoform	ND	5.00	ug/L
74-83-9	Bromomethane	ND	5.00	ug/L
75-15-0	Carbon disulfide	ND	5.00	ug/L
56-23-5	Carbon tetrachloride	ND	5.00	ug/L
108-90-7	Chlorobenzene	ND	5.00	ug/L
75-00-3	Chloroethane	ND	5.00	ug/L
67-66-3	Chloroform	ND	5.00	ug/L
74-87-3	Chloromethane	ND	5.00	ug/L
156-59-2	**cis-1,2-Dichloroethene**	**59.7**	**5.00**	**ug/L**
10061-01-5	cis-1,3-Dichloropropene	ND	5.00	ug/L
124-48-1	Dibromochloromethane	ND	5.00	ug/L
74-95-3	Dibromomethane	ND	5.00	ug/L
75-71-8	Dichlorodifluoromethane	ND	5.00	ug/L
100-41-4	Ethylbenzene	ND	5.00	ug/L
87-68-3	Hexachlorobutadiene	ND	5.00	ug/L

Sample Results

MW-19@30'

Collect Date	12/15/2016 14:37	**GCAL ID**	21612205005
Receive Date	12/20/2016 11:05	**Matrix**	Water

EPA 8260B (Continued)

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	1	12/24/2016 01:47	JCK	601473

CAS#	Parameter	Result	LOQ	Units
98-82-8	Isopropylbenzene (Cumene)	ND	5.00	ug/L
136777-61-2	m,p-Xylene	ND	10.0	ug/L
75-09-2	Methylene chloride	ND	5.00	ug/L
91-20-3	Naphthalene	ND	5.00	ug/L
104-51-8	n-Butylbenzene	ND	5.00	ug/L
103-65-1	n-Propylbenzene	ND	5.00	ug/L
95-47-6	o-Xylene	ND	5.00	ug/L
135-98-8	sec-Butylbenzene	ND	5.00	ug/L
100-42-5	Styrene	ND	5.00	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	ND	5.00	ug/L
98-06-6	tert-Butylbenzene	ND	5.00	ug/L
127-18-4	Tetrachloroethene	ND	5.00	ug/L
108-88-3	Toluene	ND	5.00	ug/L
156-60-5	trans-1,2-Dichloroethene	ND	5.00	ug/L
10061-02-6	trans-1,3-Dichloropropene	ND	5.00	ug/L
110-57-6	trans-1,4-Dichloro-2-butene	ND	5.00	ug/L
79-01-6	Trichloroethene	ND	5.00	ug/L
75-69-4	Trichlorofluoromethane	ND	5.00	ug/L
76-13-1	Trichlorotrifluoroethane	ND	5.00	ug/L
75-01-4	**Vinyl chloride**	**9.45**	**2.00**	**ug/L**
1330-20-7	Xylene (total)	ND	15.0	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	51.4	ug/L	103	78 - 130
1868-53-7	Dibromofluoromethane	50	51.4	ug/L	103	77 - 127
2037-26-5	Toluene d8	50	52.1	ug/L	104	76 - 134
17060-07-0	1,2-Dichloroethane-d4	50	52.5	ug/L	105	71 - 127

MW-20@60'

Collect Date	12/15/2016 10:07	**GCAL ID**	21612205006
Receive Date	12/20/2016 11:05	**Matrix**	Water

EPA 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	2	12/24/2016 06:27	JCK	601473

CAS#	Parameter	Result	LOQ	Units
630-20-6	1,1,1,2-Tetrachloroethane	ND	10.0	ug/L
71-55-6	1,1,1-Trichloroethane	ND	10.0	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	ND	10.0	ug/L
79-00-5	1,1,2-Trichloroethane	ND	10.0	ug/L
75-34-3	1,1-Dichloroethane	ND	10.0	ug/L

Sample Results

MW-20@60'	**Collect Date**	12/15/2016 10:07	**GCAL ID**	21612205006
	Receive Date	12/20/2016 11:05	**Matrix**	Water

EPA 8260B (Continued)

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	2	12/24/2016 06:27	JCK	601473

CAS#	Parameter	Result	LOQ	Units
75-35-4	1,1-Dichloroethene	ND	10.0	ug/L
563-58-6	1,1-Dichloropropene	ND	10.0	ug/L
96-18-4	1,2,3-Trichloropropane	ND	10.0	ug/L
120-82-1	1,2,4-Trichlorobenzene	ND	10.0	ug/L
95-63-6	1,2,4-Trimethylbenzene	ND	10.0	ug/L
96-12-8	1,2-Dibromo-3-chloropropane	ND	10.0	ug/L
106-93-4	1,2-Dibromoethane	ND	10.0	ug/L
95-50-1	1,2-Dichlorobenzene	ND	10.0	ug/L
107-06-2	1,2-Dichloroethane	ND	10.0	ug/L
540-59-0	**1,2-Dichloroethene(Total)**	**75.0**	**20.0**	**ug/L**
78-87-5	1,2-Dichloropropane	ND	10.0	ug/L
108-67-8	1,3,5-Trimethylbenzene	ND	10.0	ug/L
541-73-1	1,3-Dichlorobenzene	ND	10.0	ug/L
142-28-9	1,3-Dichloropropane	ND	10.0	ug/L
106-46-7	1,4-Dichlorobenzene	ND	10.0	ug/L
594-20-7	2,2-Dichloropropane	ND	10.0	ug/L
78-93-3	2-Butanone	ND	10.0	ug/L
95-49-8	2-Chlorotoluene	ND	10.0	ug/L
591-78-6	2-Hexanone	ND	10.0	ug/L
106-43-4	4-Chlorotoluene	ND	10.0	ug/L
99-87-6	4-Isopropyltoluene	ND	10.0	ug/L
108-10-1	4-Methyl-2-pentanone	ND	10.0	ug/L
67-64-1	Acetone	ND	10.0	ug/L
71-43-2	Benzene	ND	10.0	ug/L
108-86-1	Bromobenzene	ND	10.0	ug/L
74-97-5	Bromochloromethane	ND	10.0	ug/L
75-27-4	Bromodichloromethane	ND	10.0	ug/L
75-25-2	Bromoform	ND	10.0	ug/L
74-83-9	Bromomethane	ND	10.0	ug/L
75-15-0	Carbon disulfide	ND	10.0	ug/L
56-23-5	Carbon tetrachloride	ND	10.0	ug/L
108-90-7	Chlorobenzene	ND	10.0	ug/L
75-00-3	Chloroethane	ND	10.0	ug/L
67-66-3	Chloroform	ND	10.0	ug/L
74-87-3	Chloromethane	ND	10.0	ug/L
156-59-2	**cis-1,2-Dichloroethene**	**72.3**	**10.0**	**ug/L**
10061-01-5	cis-1,3-Dichloropropene	ND	10.0	ug/L
124-48-1	Dibromochloromethane	ND	10.0	ug/L
74-95-3	Dibromomethane	ND	10.0	ug/L
75-71-8	Dichlorodifluoromethane	ND	10.0	ug/L
100-41-4	Ethylbenzene	ND	10.0	ug/L
87-68-3	Hexachlorobutadiene	ND	10.0	ug/L
98-82-8	Isopropylbenzene (Cumene)	ND	10.0	ug/L
136777-61-2	m,p-Xylene	ND	20.0	ug/L
75-09-2	Methylene chloride	ND	10.0	ug/L
91-20-3	Naphthalene	ND	10.0	ug/L
104-51-8	n-Butylbenzene	ND	10.0	ug/L

Sample Results

MW-20@60'	**Collect Date**	12/15/2016 10:07	**GCAL ID**	21612205006
	Receive Date	12/20/2016 11:05	**Matrix**	Water

EPA 8260B (Continued)

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	2	12/24/2016 06:27	JCK	601473

CAS#	Parameter	Result	LOQ	Units
103-65-1	n-Propylbenzene	ND	10.0	ug/L
95-47-6	o-Xylene	ND	10.0	ug/L
135-98-8	sec-Butylbenzene	ND	10.0	ug/L
100-42-5	Styrene	ND	10.0	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	ND	10.0	ug/L
98-06-6	tert-Butylbenzene	ND	10.0	ug/L
108-88-3	Toluene	ND	10.0	ug/L
156-60-5	trans-1,2-Dichloroethene	ND	10.0	ug/L
10061-02-6	trans-1,3-Dichloropropene	ND	10.0	ug/L
110-57-6	trans-1,4-Dichloro-2-butene	ND	10.0	ug/L
79-01-6	**Trichloroethene**	**102**	**10.0**	**ug/L**
75-69-4	Trichlorofluoromethane	ND	10.0	ug/L
76-13-1	Trichlorotrifluoroethane	ND	10.0	ug/L
75-01-4	Vinyl chloride	ND	4.00	ug/L
1330-20-7	Xylene (total)	ND	30.0	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	100	99.5	ug/L	100	78 - 130
1868-53-7	Dibromofluoromethane	100	102	ug/L	102	77 - 127
2037-26-5	Toluene d8	100	103	ug/L	103	76 - 134
17060-07-0	1,2-Dichloroethane-d4	100	102	ug/L	102	71 - 127

EPA 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	20	12/24/2016 04:33	JCK	601473

CAS#	Parameter	Result	LOQ	Units
127-18-4	**Tetrachloroethene**	**1230**	**100**	**ug/L**

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	1000	987	ug/L	99	78 - 130
1868-53-7	Dibromofluoromethane	1000	1010	ug/L	101	77 - 127
2037-26-5	Toluene d8	1000	1010	ug/L	101	76 - 134
17060-07-0	1,2-Dichloroethane-d4	1000	1030	ug/L	103	71 - 127

Sample Results

MW-21@60'	**Collect Date**	12/16/2016 13:29	**GCAL ID**	21612205007
	Receive Date	12/20/2016 11:05	**Matrix**	Water

EPA 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	5	12/24/2016 06:50	JCK	601473

CAS#	Parameter	Result	LOQ	Units
630-20-6	1,1,1,2-Tetrachloroethane	ND	25.0	ug/L
71-55-6	1,1,1-Trichloroethane	ND	25.0	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	ND	25.0	ug/L
79-00-5	1,1,2-Trichloroethane	ND	25.0	ug/L
75-34-3	1,1-Dichloroethane	ND	25.0	ug/L
75-35-4	1,1-Dichloroethene	ND	25.0	ug/L
563-58-6	1,1-Dichloropropene	ND	25.0	ug/L
96-18-4	1,2,3-Trichloropropane	ND	25.0	ug/L
120-82-1	1,2,4-Trichlorobenzene	ND	25.0	ug/L
95-63-6	1,2,4-Trimethylbenzene	ND	25.0	ug/L
96-12-8	1,2-Dibromo-3-chloropropane	ND	25.0	ug/L
106-93-4	1,2-Dibromoethane	ND	25.0	ug/L
95-50-1	1,2-Dichlorobenzene	ND	25.0	ug/L
107-06-2	1,2-Dichloroethane	ND	25.0	ug/L
540-59-0	1,2-Dichloroethene(Total)	ND	50.0	ug/L
78-87-5	1,2-Dichloropropane	ND	25.0	ug/L
108-67-8	1,3,5-Trimethylbenzene	ND	25.0	ug/L
541-73-1	1,3-Dichlorobenzene	ND	25.0	ug/L
142-28-9	1,3-Dichloropropane	ND	25.0	ug/L
106-46-7	1,4-Dichlorobenzene	ND	25.0	ug/L
594-20-7	2,2-Dichloropropane	ND	25.0	ug/L
78-93-3	2-Butanone	ND	25.0	ug/L
95-49-8	2-Chlorotoluene	ND	25.0	ug/L
591-78-6	2-Hexanone	ND	25.0	ug/L
106-43-4	4-Chlorotoluene	ND	25.0	ug/L
99-87-6	4-Isopropyltoluene	ND	25.0	ug/L
108-10-1	4-Methyl-2-pentanone	ND	25.0	ug/L
67-64-1	Acetone	ND	25.0	ug/L
71-43-2	Benzene	ND	25.0	ug/L
108-86-1	Bromobenzene	ND	25.0	ug/L
74-97-5	Bromochloromethane	ND	25.0	ug/L
75-27-4	Bromodichloromethane	ND	25.0	ug/L
75-25-2	Bromoform	ND	25.0	ug/L
74-83-9	Bromomethane	ND	25.0	ug/L
75-15-0	Carbon disulfide	ND	25.0	ug/L
56-23-5	Carbon tetrachloride	ND	25.0	ug/L
108-90-7	Chlorobenzene	ND	25.0	ug/L
75-00-3	Chloroethane	ND	25.0	ug/L
67-66-3	Chloroform	ND	25.0	ug/L
74-87-3	Chloromethane	ND	25.0	ug/L
156-59-2	cis-1,2-Dichloroethene	ND	25.0	ug/L
10061-01-5	cis-1,3-Dichloropropene	ND	25.0	ug/L
124-48-1	Dibromochloromethane	ND	25.0	ug/L
74-95-3	Dibromomethane	ND	25.0	ug/L
75-71-8	Dichlorodifluoromethane	ND	25.0	ug/L
100-41-4	Ethylbenzene	ND	25.0	ug/L
87-68-3	Hexachlorobutadiene	ND	25.0	ug/L

Sample Results

MW-21@60'	**Collect Date**	12/16/2016 13:29	**GCAL ID**	21612205007
	Receive Date	12/20/2016 11:05	**Matrix**	Water

EPA 8260B (Continued)

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	5	12/24/2016 06:50	JCK	601473

CAS#	Parameter	Result	LOQ	Units
98-82-8	Isopropylbenzene (Cumene)	ND	25.0	ug/L
136777-61-2	m,p-Xylene	ND	50.0	ug/L
75-09-2	Methylene chloride	ND	25.0	ug/L
91-20-3	Naphthalene	ND	25.0	ug/L
104-51-8	n-Butylbenzene	ND	25.0	ug/L
103-65-1	n-Propylbenzene	ND	25.0	ug/L
95-47-6	o-Xylene	ND	25.0	ug/L
135-98-8	sec-Butylbenzene	ND	25.0	ug/L
100-42-5	Styrene	ND	25.0	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	ND	25.0	ug/L
98-06-6	tert-Butylbenzene	ND	25.0	ug/L
108-88-3	Toluene	ND	25.0	ug/L
156-60-5	trans-1,2-Dichloroethene	ND	25.0	ug/L
10061-02-6	trans-1,3-Dichloropropene	ND	25.0	ug/L
110-57-6	trans-1,4-Dichloro-2-butene	ND	25.0	ug/L
79-01-6	Trichloroethene	ND	25.0	ug/L
75-69-4	Trichlorofluoromethane	ND	25.0	ug/L
76-13-1	Trichlorotrifluoroethane	ND	25.0	ug/L
75-01-4	Vinyl chloride	ND	10.0	ug/L
1330-20-7	Xylene (total)	ND	75.0	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	250	253	ug/L	101	78 - 130
1868-53-7	Dibromofluoromethane	250	250	ug/L	100	77 - 127
2037-26-5	Toluene d8	250	258	ug/L	103	76 - 134
17060-07-0	1,2-Dichloroethane-d4	250	256	ug/L	102	71 - 127

EPA 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	50	12/24/2016 04:56	JCK	601473

CAS#	Parameter	Result	LOQ	Units
127-18-4	**Tetrachloroethene**	**1110**	**250**	**ug/L**

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	2500	2560	ug/L	102	78 - 130
1868-53-7	Dibromofluoromethane	2500	2540	ug/L	102	77 - 127
2037-26-5	Toluene d8	2500	2520	ug/L	101	76 - 134
17060-07-0	1,2-Dichloroethane-d4	2500	2580	ug/L	103	71 - 127

Sample Results

MW-22@60'	**Collect Date**	12/16/2016 12:37	**GCAL ID**	21612205008
	Receive Date	12/20/2016 11:05	**Matrix**	Water

EPA 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	5	12/24/2016 07:13	JCK	601473

CAS#	Parameter	Result	LOQ	Units
630-20-6	1,1,1,2-Tetrachloroethane	ND	25.0	ug/L
71-55-6	1,1,1-Trichloroethane	ND	25.0	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	ND	25.0	ug/L
79-00-5	1,1,2-Trichloroethane	ND	25.0	ug/L
75-34-3	1,1-Dichloroethane	ND	25.0	ug/L
75-35-4	1,1-Dichloroethene	ND	25.0	ug/L
563-58-6	1,1-Dichloropropene	ND	25.0	ug/L
96-18-4	1,2,3-Trichloropropane	ND	25.0	ug/L
120-82-1	1,2,4-Trichlorobenzene	ND	25.0	ug/L
95-63-6	1,2,4-Trimethylbenzene	ND	25.0	ug/L
96-12-8	1,2-Dibromo-3-chloropropane	ND	25.0	ug/L
106-93-4	1,2-Dibromoethane	ND	25.0	ug/L
95-50-1	1,2-Dichlorobenzene	ND	25.0	ug/L
107-06-2	1,2-Dichloroethane	ND	25.0	ug/L
540-59-0	**1,2-Dichloroethene(Total)**	**491**	**50.0**	**ug/L**
78-87-5	1,2-Dichloropropane	ND	25.0	ug/L
108-67-8	1,3,5-Trimethylbenzene	ND	25.0	ug/L
541-73-1	1,3-Dichlorobenzene	ND	25.0	ug/L
142-28-9	1,3-Dichloropropane	ND	25.0	ug/L
106-46-7	1,4-Dichlorobenzene	ND	25.0	ug/L
594-20-7	2,2-Dichloropropane	ND	25.0	ug/L
78-93-3	2-Butanone	ND	25.0	ug/L
95-49-8	2-Chlorotoluene	ND	25.0	ug/L
591-78-6	2-Hexanone	ND	25.0	ug/L
106-43-4	4-Chlorotoluene	ND	25.0	ug/L
99-87-6	4-Isopropyltoluene	ND	25.0	ug/L
108-10-1	4-Methyl-2-pentanone	ND	25.0	ug/L
67-64-1	Acetone	ND	25.0	ug/L
71-43-2	Benzene	ND	25.0	ug/L
108-86-1	Bromobenzene	ND	25.0	ug/L
74-97-5	Bromochloromethane	ND	25.0	ug/L
75-27-4	Bromodichloromethane	ND	25.0	ug/L
75-25-2	Bromoform	ND	25.0	ug/L
74-83-9	Bromomethane	ND	25.0	ug/L
75-15-0	Carbon disulfide	ND	25.0	ug/L
56-23-5	Carbon tetrachloride	ND	25.0	ug/L
108-90-7	Chlorobenzene	ND	25.0	ug/L
75-00-3	Chloroethane	ND	25.0	ug/L
67-66-3	Chloroform	ND	25.0	ug/L
74-87-3	Chloromethane	ND	25.0	ug/L
156-59-2	**cis-1,2-Dichloroethene**	**491**	**25.0**	**ug/L**
10061-01-5	cis-1,3-Dichloropropene	ND	25.0	ug/L
124-48-1	Dibromochloromethane	ND	25.0	ug/L
74-95-3	Dibromomethane	ND	25.0	ug/L
75-71-8	Dichlorodifluoromethane	ND	25.0	ug/L
100-41-4	Ethylbenzene	ND	25.0	ug/L
87-68-3	Hexachlorobutadiene	ND	25.0	ug/L

Sample Results

MW-22@60'	**Collect Date**	12/16/2016 12:37	**GCAL ID**	21612205008
	Receive Date	12/20/2016 11:05	**Matrix**	Water

EPA 8260B (Continued)

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	5	12/24/2016 07:13	JCK	601473

CAS#	Parameter	Result	LOQ	Units
98-82-8	Isopropylbenzene (Cumene)	ND	25.0	ug/L
136777-61-2	m,p-Xylene	ND	50.0	ug/L
75-09-2	Methylene chloride	ND	25.0	ug/L
91-20-3	Naphthalene	ND	25.0	ug/L
104-51-8	n-Butylbenzene	ND	25.0	ug/L
103-65-1	n-Propylbenzene	ND	25.0	ug/L
95-47-6	o-Xylene	ND	25.0	ug/L
135-98-8	sec-Butylbenzene	ND	25.0	ug/L
100-42-5	Styrene	ND	25.0	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	ND	25.0	ug/L
98-06-6	tert-Butylbenzene	ND	25.0	ug/L
108-88-3	Toluene	ND	25.0	ug/L
156-60-5	trans-1,2-Dichloroethene	ND	25.0	ug/L
10061-02-6	trans-1,3-Dichloropropene	ND	25.0	ug/L
110-57-6	trans-1,4-Dichloro-2-butene	ND	25.0	ug/L
79-01-6	**Trichloroethene**	**140**	**25.0**	**ug/L**
75-69-4	Trichlorofluoromethane	ND	25.0	ug/L
76-13-1	Trichlorotrifluoroethane	ND	25.0	ug/L
75-01-4	Vinyl chloride	ND	10.0	ug/L
1330-20-7	Xylene (total)	ND	75.0	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	250	254	ug/L	102	78 - 130
1868-53-7	Dibromofluoromethane	250	259	ug/L	104	77 - 127
2037-26-5	Toluene d8	250	254	ug/L	102	76 - 134
17060-07-0	1,2-Dichloroethane-d4	250	260	ug/L	104	71 - 127

EPA 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	50	12/24/2016 05:18	JCK	601473

CAS#	Parameter	Result	LOQ	Units
127-18-4	**Tetrachloroethene**	**1580**	**250**	**ug/L**

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	2500	2560	ug/L	102	78 - 130
1868-53-7	Dibromofluoromethane	2500	2580	ug/L	103	77 - 127
2037-26-5	Toluene d8	2500	2550	ug/L	102	76 - 134
17060-07-0	1,2-Dichloroethane-d4	2500	2570	ug/L	103	71 - 127

Sample Results

MW-23@60'	**Collect Date**	12/16/2016 11:53	**GCAL ID**	21612205009
	Receive Date	12/20/2016 11:05	**Matrix**	Water

EPA 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	5	12/24/2016 07:36	JCK	601473

CAS#	Parameter	Result	LOQ	Units
630-20-6	1,1,1,2-Tetrachloroethane	ND	25.0	ug/L
71-55-6	1,1,1-Trichloroethane	ND	25.0	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	ND	25.0	ug/L
79-00-5	1,1,2-Trichloroethane	ND	25.0	ug/L
75-34-3	1,1-Dichloroethane	ND	25.0	ug/L
75-35-4	1,1-Dichloroethene	ND	25.0	ug/L
563-58-6	1,1-Dichloropropene	ND	25.0	ug/L
96-18-4	1,2,3-Trichloropropane	ND	25.0	ug/L
120-82-1	1,2,4-Trichlorobenzene	ND	25.0	ug/L
95-63-6	1,2,4-Trimethylbenzene	ND	25.0	ug/L
96-12-8	1,2-Dibromo-3-chloropropane	ND	25.0	ug/L
106-93-4	1,2-Dibromoethane	ND	25.0	ug/L
95-50-1	1,2-Dichlorobenzene	ND	25.0	ug/L
107-06-2	1,2-Dichloroethane	ND	25.0	ug/L
78-87-5	1,2-Dichloropropane	ND	25.0	ug/L
108-67-8	1,3,5-Trimethylbenzene	ND	25.0	ug/L
541-73-1	1,3-Dichlorobenzene	ND	25.0	ug/L
142-28-9	1,3-Dichloropropane	ND	25.0	ug/L
106-46-7	1,4-Dichlorobenzene	ND	25.0	ug/L
594-20-7	2,2-Dichloropropane	ND	25.0	ug/L
78-93-3	2-Butanone	ND	25.0	ug/L
95-49-8	2-Chlorotoluene	ND	25.0	ug/L
591-78-6	2-Hexanone	ND	25.0	ug/L
106-43-4	4-Chlorotoluene	ND	25.0	ug/L
99-87-6	4-Isopropyltoluene	ND	25.0	ug/L
108-10-1	4-Methyl-2-pentanone	ND	25.0	ug/L
67-64-1	Acetone	ND	25.0	ug/L
71-43-2	Benzene	ND	25.0	ug/L
108-86-1	Bromobenzene	ND	25.0	ug/L
74-97-5	Bromochloromethane	ND	25.0	ug/L
75-27-4	Bromodichloromethane	ND	25.0	ug/L
75-25-2	Bromoform	ND	25.0	ug/L
74-83-9	Bromomethane	ND	25.0	ug/L
75-15-0	Carbon disulfide	ND	25.0	ug/L
56-23-5	Carbon tetrachloride	ND	25.0	ug/L
108-90-7	Chlorobenzene	ND	25.0	ug/L
75-00-3	Chloroethane	ND	25.0	ug/L
67-66-3	Chloroform	ND	25.0	ug/L
74-87-3	Chloromethane	ND	25.0	ug/L
10061-01-5	cis-1,3-Dichloropropene	ND	25.0	ug/L
124-48-1	Dibromochloromethane	ND	25.0	ug/L
74-95-3	Dibromomethane	ND	25.0	ug/L
75-71-8	Dichlorodifluoromethane	ND	25.0	ug/L
100-41-4	Ethylbenzene	ND	25.0	ug/L
87-68-3	Hexachlorobutadiene	ND	25.0	ug/L
98-82-8	Isopropylbenzene (Cumene)	ND	25.0	ug/L
136777-61-2	m,p-Xylene	ND	50.0	ug/L

Sample Results

MW-23@60'	**Collect Date**	12/16/2016 11:53	**GCAL ID**	21612205009
	Receive Date	12/20/2016 11:05	**Matrix**	Water

EPA 8260B (Continued)

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	5	12/24/2016 07:36	JCK	601473

CAS#	Parameter	Result	LOQ	Units
75-09-2	Methylene chloride	ND	25.0	ug/L
91-20-3	Naphthalene	ND	25.0	ug/L
104-51-8	n-Butylbenzene	ND	25.0	ug/L
103-65-1	n-Propylbenzene	ND	25.0	ug/L
95-47-6	o-Xylene	ND	25.0	ug/L
135-98-8	sec-Butylbenzene	ND	25.0	ug/L
100-42-5	Styrene	ND	25.0	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	ND	25.0	ug/L
98-06-6	tert-Butylbenzene	ND	25.0	ug/L
108-88-3	Toluene	ND	25.0	ug/L
156-60-5	trans-1,2-Dichloroethene	ND	25.0	ug/L
10061-02-6	trans-1,3-Dichloropropene	ND	25.0	ug/L
110-57-6	trans-1,4-Dichloro-2-butene	ND	25.0	ug/L
79-01-6	**Trichloroethene**	**397**	**25.0**	**ug/L**
75-69-4	Trichlorofluoromethane	ND	25.0	ug/L
76-13-1	Trichlorotrifluoroethane	ND	25.0	ug/L
75-01-4	Vinyl chloride	ND	10.0	ug/L
1330-20-7	Xylene (total)	ND	75.0	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	250	252	ug/L	101	78 - 130
1868-53-7	Dibromofluoromethane	250	263	ug/L	105	77 - 127
2037-26-5	Toluene d8	250	259	ug/L	104	76 - 134
17060-07-0	1,2-Dichloroethane-d4	250	262	ug/L	105	71 - 127

EPA 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	50	12/24/2016 05:41	JCK	601473

CAS#	Parameter	Result	LOQ	Units
540-59-0	**1,2-Dichloroethene(Total)**	**1780**	**500**	**ug/L**
156-59-2	**cis-1,2-Dichloroethene**	**1780**	**250**	**ug/L**
127-18-4	**Tetrachloroethene**	**1670**	**250**	**ug/L**

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	2500	2520	ug/L	101	78 - 130
1868-53-7	Dibromofluoromethane	2500	2560	ug/L	102	77 - 127
2037-26-5	Toluene d8	2500	2580	ug/L	103	76 - 134
17060-07-0	1,2-Dichloroethane-d4	2500	2540	ug/L	102	71 - 127

Sample Results

MW-24@30'	**Collect Date**	12/15/2016 12:08	**GCAL ID**	21612205010
	Receive Date	12/20/2016 11:05	**Matrix**	Water

EPA 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	1	12/24/2016 03:24	JCK	601473

CAS#	Parameter	Result	LOQ	Units
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.00	ug/L
71-55-6	1,1,1-Trichloroethane	ND	5.00	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.00	ug/L
79-00-5	1,1,2-Trichloroethane	ND	5.00	ug/L
75-34-3	1,1-Dichloroethane	ND	5.00	ug/L
75-35-4	1,1-Dichloroethene	ND	5.00	ug/L
563-58-6	1,1-Dichloropropene	ND	5.00	ug/L
96-18-4	1,2,3-Trichloropropane	ND	5.00	ug/L
120-82-1	1,2,4-Trichlorobenzene	ND	5.00	ug/L
95-63-6	1,2,4-Trimethylbenzene	ND	5.00	ug/L
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.00	ug/L
106-93-4	1,2-Dibromoethane	ND	5.00	ug/L
95-50-1	1,2-Dichlorobenzene	ND	5.00	ug/L
107-06-2	1,2-Dichloroethane	ND	5.00	ug/L
540-59-0	**1,2-Dichloroethene(Total)**	**310**	**10.0**	**ug/L**
78-87-5	1,2-Dichloropropane	ND	5.00	ug/L
108-67-8	1,3,5-Trimethylbenzene	ND	5.00	ug/L
541-73-1	1,3-Dichlorobenzene	ND	5.00	ug/L
142-28-9	1,3-Dichloropropane	ND	5.00	ug/L
106-46-7	1,4-Dichlorobenzene	ND	5.00	ug/L
594-20-7	2,2-Dichloropropane	ND	5.00	ug/L
78-93-3	2-Butanone	ND	5.00	ug/L
95-49-8	2-Chlorotoluene	ND	5.00	ug/L
591-78-6	2-Hexanone	ND	5.00	ug/L
106-43-4	4-Chlorotoluene	ND	5.00	ug/L
99-87-6	4-Isopropyltoluene	ND	5.00	ug/L
108-10-1	4-Methyl-2-pentanone	ND	5.00	ug/L
67-64-1	Acetone	ND	5.00	ug/L
71-43-2	Benzene	ND	5.00	ug/L
108-86-1	Bromobenzene	ND	5.00	ug/L
74-97-5	Bromochloromethane	ND	5.00	ug/L
75-27-4	Bromodichloromethane	ND	5.00	ug/L
75-25-2	Bromoform	ND	5.00	ug/L
74-83-9	Bromomethane	ND	5.00	ug/L
75-15-0	Carbon disulfide	ND	5.00	ug/L
56-23-5	Carbon tetrachloride	ND	5.00	ug/L
108-90-7	Chlorobenzene	ND	5.00	ug/L
75-00-3	Chloroethane	ND	5.00	ug/L
67-66-3	Chloroform	ND	5.00	ug/L
74-87-3	Chloromethane	ND	5.00	ug/L
10061-01-5	cis-1,3-Dichloropropene	ND	5.00	ug/L
124-48-1	Dibromochloromethane	ND	5.00	ug/L
74-95-3	Dibromomethane	ND	5.00	ug/L
75-71-8	Dichlorodifluoromethane	ND	5.00	ug/L
100-41-4	Ethylbenzene	ND	5.00	ug/L
87-68-3	Hexachlorobutadiene	ND	5.00	ug/L
98-82-8	Isopropylbenzene (Cumene)	ND	5.00	ug/L

Sample Results

MW-24@30'	**Collect Date**	12/15/2016 12:08	**GCAL ID**	21612205010
	Receive Date	12/20/2016 11:05	**Matrix**	Water

EPA 8260B (Continued)

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	1	12/24/2016 03:24	JCK	601473

CAS#	Parameter	Result	LOQ	Units
136777-61-2	m,p-Xylene	ND	10.0	ug/L
75-09-2	Methylene chloride	ND	5.00	ug/L
91-20-3	Naphthalene	ND	5.00	ug/L
104-51-8	n-Butylbenzene	ND	5.00	ug/L
103-65-1	n-Propylbenzene	ND	5.00	ug/L
95-47-6	o-Xylene	ND	5.00	ug/L
135-98-8	sec-Butylbenzene	ND	5.00	ug/L
100-42-5	Styrene	ND	5.00	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	ND	5.00	ug/L
98-06-6	tert-Butylbenzene	ND	5.00	ug/L
108-88-3	Toluene	ND	5.00	ug/L
156-60-5	trans-1,2-Dichloroethene	ND	5.00	ug/L
10061-02-6	trans-1,3-Dichloropropene	ND	5.00	ug/L
110-57-6	trans-1,4-Dichloro-2-butene	ND	5.00	ug/L
79-01-6	**Trichloroethene**	**56.8**	**5.00**	**ug/L**
75-69-4	Trichlorofluoromethane	ND	5.00	ug/L
76-13-1	Trichlorotrifluoroethane	ND	5.00	ug/L
75-01-4	Vinyl chloride	ND	2.00	ug/L
1330-20-7	Xylene (total)	ND	15.0	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	50	51.7	ug/L	103	78 - 130
1868-53-7	Dibromofluoromethane	50	51.9	ug/L	104	77 - 127
2037-26-5	Toluene d8	50	51.1	ug/L	102	76 - 134
17060-07-0	1,2-Dichloroethane-d4	50	52	ug/L	104	71 - 127

EPA 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	5	12/24/2016 03:01	JCK	601473

CAS#	Parameter	Result	LOQ	Units
156-59-2	**cis-1,2-Dichloroethene**	**271**	**25.0**	**ug/L**
127-18-4	**Tetrachloroethene**	**200**	**25.0**	**ug/L**

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	250	251	ug/L	100	78 - 130
1868-53-7	Dibromofluoromethane	250	257	ug/L	103	77 - 127
2037-26-5	Toluene d8	250	262	ug/L	105	76 - 134
17060-07-0	1,2-Dichloroethane-d4	250	260	ug/L	104	71 - 127

Sample Results

PT-3@60'	**Collect Date**	12/15/2016 09:19	**GCAL ID**	21612205011
	Receive Date	12/20/2016 11:05	**Matrix**	Water

EPA 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	20	12/27/2016 20:31	JCK	601529

CAS#	Parameter	Result	LOQ	Units
630-20-6	1,1,1,2-Tetrachloroethane	ND	100	ug/L
71-55-6	1,1,1-Trichloroethane	ND	100	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	ND	100	ug/L
79-00-5	1,1,2-Trichloroethane	ND	100	ug/L
75-34-3	1,1-Dichloroethane	ND	100	ug/L
75-35-4	1,1-Dichloroethene	ND	100	ug/L
563-58-6	1,1-Dichloropropene	ND	100	ug/L
96-18-4	1,2,3-Trichloropropane	ND	100	ug/L
120-82-1	1,2,4-Trichlorobenzene	ND	100	ug/L
95-63-6	1,2,4-Trimethylbenzene	ND	100	ug/L
96-12-8	1,2-Dibromo-3-chloropropane	ND	100	ug/L
106-93-4	1,2-Dibromoethane	ND	100	ug/L
95-50-1	1,2-Dichlorobenzene	ND	100	ug/L
107-06-2	1,2-Dichloroethane	ND	100	ug/L
540-59-0	**1,2-Dichloroethene(Total)**	**484**	**200**	**ug/L**
78-87-5	1,2-Dichloropropane	ND	100	ug/L
108-67-8	1,3,5-Trimethylbenzene	ND	100	ug/L
541-73-1	1,3-Dichlorobenzene	ND	100	ug/L
142-28-9	1,3-Dichloropropane	ND	100	ug/L
106-46-7	1,4-Dichlorobenzene	ND	100	ug/L
594-20-7	2,2-Dichloropropane	ND	100	ug/L
78-93-3	2-Butanone	ND	100	ug/L
95-49-8	2-Chlorotoluene	ND	100	ug/L
591-78-6	2-Hexanone	ND	100	ug/L
106-43-4	4-Chlorotoluene	ND	100	ug/L
99-87-6	4-Isopropyltoluene	ND	100	ug/L
108-10-1	4-Methyl-2-pentanone	ND	100	ug/L
67-64-1	Acetone	ND	100	ug/L
71-43-2	Benzene	ND	100	ug/L
108-86-1	Bromobenzene	ND	100	ug/L
74-97-5	Bromochloromethane	ND	100	ug/L
75-27-4	Bromodichloromethane	ND	100	ug/L
75-25-2	Bromoform	ND	100	ug/L
74-83-9	Bromomethane	ND	100	ug/L
75-15-0	Carbon disulfide	ND	100	ug/L
56-23-5	Carbon tetrachloride	ND	100	ug/L
108-90-7	Chlorobenzene	ND	100	ug/L
75-00-3	Chloroethane	ND	100	ug/L
67-66-3	Chloroform	ND	100	ug/L
74-87-3	Chloromethane	ND	100	ug/L
156-59-2	**cis-1,2-Dichloroethene**	**473**	**100**	**ug/L**
10061-01-5	cis-1,3-Dichloropropene	ND	100	ug/L
124-48-1	Dibromochloromethane	ND	100	ug/L
74-95-3	Dibromomethane	ND	100	ug/L
75-71-8	Dichlorodifluoromethane	ND	100	ug/L
100-41-4	Ethylbenzene	ND	100	ug/L
87-68-3	Hexachlorobutadiene	ND	100	ug/L

Sample Results

PT-3@60'	**Collect Date**	12/15/2016 09:19	**GCAL ID**	21612205011
	Receive Date	12/20/2016 11:05	**Matrix**	Water

EPA 8260B (Continued)

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	20	12/27/2016 20:31	JCK	601529

CAS#	Parameter	Result	LOQ	Units
98-82-8	Isopropylbenzene (Cumene)	ND	100	ug/L
136777-61-2	m,p-Xylene	ND	200	ug/L
75-09-2	Methylene chloride	ND	100	ug/L
91-20-3	Naphthalene	ND	100	ug/L
104-51-8	n-Butylbenzene	ND	100	ug/L
103-65-1	n-Propylbenzene	ND	100	ug/L
95-47-6	o-Xylene	ND	100	ug/L
135-98-8	sec-Butylbenzene	ND	100	ug/L
100-42-5	Styrene	ND	100	ug/L
1634-04-4	tert-Butyl methyl ether (MTBE)	ND	100	ug/L
98-06-6	tert-Butylbenzene	ND	100	ug/L
108-88-3	Toluene	ND	100	ug/L
156-60-5	trans-1,2-Dichloroethene	ND	100	ug/L
10061-02-6	trans-1,3-Dichloropropene	ND	100	ug/L
110-57-6	trans-1,4-Dichloro-2-butene	ND	100	ug/L
79-01-6	**Trichloroethene**	**742**	**100**	**ug/L**
75-69-4	Trichlorofluoromethane	ND	100	ug/L
76-13-1	Trichlorotrifluoroethane	ND	100	ug/L
75-01-4	Vinyl chloride	ND	40.0	ug/L
1330-20-7	Xylene (total)	ND	300	ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	1000	997	ug/L	100	78 - 130
1868-53-7	Dibromofluoromethane	1000	988	ug/L	99	77 - 127
2037-26-5	Toluene d8	1000	1080	ug/L	108	76 - 134
17060-07-0	1,2-Dichloroethane-d4	1000	1030	ug/L	103	71 - 127

EPA 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	200	12/27/2016 20:08	JCK	601529

CAS#	Parameter	Result	LOQ	Units
127-18-4	**Tetrachloroethene**	**11300**	**1000**	**ug/L**

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	10000	10000	ug/L	100	78 - 130
1868-53-7	Dibromofluoromethane	10000	10300	ug/L	103	77 - 127
2037-26-5	Toluene d8	10000	10500	ug/L	105	76 - 134
17060-07-0	1,2-Dichloroethane-d4	10000	10200	ug/L	102	71 - 127

GC/MS Volatiles QC Summary

Analytical Batch 601473	Client ID	MB601473		LCS601473				LCSD601473				
	GCAL ID	1641333		1641334				1641335				
	Sample Type	MB		LCS				LCSD				
	Prep Date	NA		NA				NA				
	Analysis Date	12/23/2016 22:21		12/23/2016 20:49				12/23/2016 21:12				
	Matrix	Water		Water				Water				
EPA 8260B		Units Result	ug/L LOQ	Spike Added	Result	%R	Control Limits%R	Spike Added	Result	%R	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	630-20-6	ND	5.00	50.0	47.0	94	75 - 124	50.0	51.3	103	9	30
1,1,1-Trichloroethane	71-55-6	ND	5.00	50.0	49.5	99	76 - 126	50.0	53.0	106	7	30
1,1,2,2-Tetrachloroethane	79-34-5	ND	5.00	50.0	47.7	95	70 - 122	50.0	52.1	104	9	30
1,1,2-Trichloroethane	79-00-5	ND	5.00	50.0	47.5	95	72 - 121	50.0	52.3	105	10	30
1,1-Dichloroethane	75-34-3	ND	5.00	50.0	49.0	98	74 - 127	50.0	52.6	105	7	30
1,1-Dichloroethene	75-35-4	ND	5.00	50.0	48.0	96	69 - 129	50.0	50.5	101	5	20
1,1-Dichloropropene	563-58-6	ND	5.00	50.0	51.7	103	72 - 131	50.0	55.9	112	8	30
1,2,3-Trichloropropane	96-18-4	ND	5.00	50.0	41.7	83	70 - 120	50.0	49.1	98	16	30
1,2,4-Trichlorobenzene	120-82-1	ND	5.00	50.0	42.5	85	61 - 135	50.0	45.4	91	7	30
1,2,4-Trimethylbenzene	95-63-6	ND	5.00	50.0	46.5	93	74 - 125	50.0	48.7	97	5	30
1,2-Dibromo-3-chloropropane	96-12-8	ND	5.00	50.0	49.1	98	57 - 121	50.0	57.4	115	16	30
1,2-Dibromoethane	106-93-4	ND	5.00	50.0	51.7	103	70 - 124	50.0	56.9	114	10	30
1,2-Dichlorobenzene	95-50-1	ND	5.00	50.0	43.6	87	71 - 126	50.0	47.8	96	9	30
1,2-Dichloroethane	107-06-2	ND	5.00	50.0	49.1	98	71 - 129	50.0	54.5	109	10	30
1,2-Dichloroethene(Total)	540-59-0	ND	10.0	100	102	102	74 - 128	100	111	111	8	30
1,2-Dichloropropane	78-87-5	ND	5.00	50.0	48.0	96	72 - 128	50.0	52.8	106	10	30
1,3,5-Trimethylbenzene	108-67-8	ND	5.00	50.0	43.3	87	71 - 132	50.0	45.3	91	5	30
1,3-Dichlorobenzene	541-73-1	ND	5.00	50.0	44.1	88	74 - 126	50.0	46.7	93	6	30
1,3-Dichloropropane	142-28-9	ND	5.00	50.0	49.1	98	74 - 122	50.0	53.0	106	8	30
1,4-Dichlorobenzene	106-46-7	ND	5.00	50.0	42.5	85	72 - 122	50.0	45.1	90	6	30
2,2-Dichloropropane	594-20-7	ND	5.00	50.0	52.0	104	77 - 124	50.0	54.8	110	5	30
2-Butanone	78-93-3	ND	5.00	50.0	49.6	99	58 - 137	50.0	57.8	116	15	30
2-Chlorotoluene	95-49-8	ND	5.00	50.0	41.3	83	72 - 127	50.0	43.6	87	5	30
2-Hexanone	591-78-6	ND	5.00	50.0	56.2	112	50 - 135	50.0	64.3	129	13	30
4-Chlorotoluene	106-43-4	ND	5.00	50.0	44.2	88	75 - 126	50.0	46.8	94	6	30
4-Isopropyltoluene	99-87-6	ND	5.00	50.0	43.9	88	71 - 129	50.0	45.9	92	4	30
4-Methyl-2-pentanone	108-10-1	ND	5.00	50.0	52.4	105	57 - 132	50.0	58.3	117	11	30
Acetone	67-64-1	ND	5.00	50.0	47.7	95	44 - 156	50.0	54.3	109	13	30
Benzene	71-43-2	ND	5.00	50.0	49.7	99	70 - 129	50.0	53.7	107	8	20
Bromobenzene	108-86-1	ND	5.00	50.0	41.6	83	71 - 120	50.0	44.8	90	7	30
Bromochloromethane	74-97-5	ND	5.00	50.0	55.8	112	76 - 130	50.0	60.1	120	7	30
Bromodichloromethane	75-27-4	ND	5.00	50.0	48.4	97	74 - 125	50.0	53.4	107	10	30
Bromoform	75-25-2	ND	5.00	50.0	46.5	93	64 - 122	50.0	51.4	103	10	30
Bromomethane	74-83-9	ND	5.00	50.0	55.0	110	47 - 138	50.0	60.5	121	10	30
Carbon disulfide	75-15-0	ND	5.00	50.0	45.2	90	69 - 136	50.0	47.2	94	4	30
Carbon tetrachloride	56-23-5	ND	5.00	50.0	52.9	106	76 - 128	50.0	56.8	114	7	30
Chlorobenzene	108-90-7	ND	5.00	50.0	48.4	97	74 - 123	50.0	51.9	104	7	20
Chloroethane	75-00-3	ND	5.00	50.0	44.1	88	62 - 141	50.0	44.7	89	1	30
Chloroform	67-66-3	ND	5.00	50.0	45.6	91	75 - 122	50.0	48.6	97	6	30
Chloromethane	74-87-3	ND	5.00	50.0	50.6	101	59 - 132	50.0	55.6	111	9	30
cis-1,2-Dichloroethene	156-59-2	ND	5.00	50.0	49.5	99	73 - 130	50.0	55.5	111	11	30
cis-1,3-Dichloropropene	10061-01-5	ND	5.00	50.0	47.5	95	71 - 132	50.0	52.4	105	10	30
Dibromochloromethane	124-48-1	ND	5.00	50.0	49.3	99	71 - 123	50.0	54.2	108	9	30
Dibromomethane	74-95-3	ND	5.00	50.0	50.7	101	72 - 129	50.0	56.5	113	11	30
Dichlorodifluoromethane	75-71-8	ND	5.00	50.0	46.3	93	58 - 140	50.0	48.5	97	5	30
Ethylbenzene	100-41-4	ND	5.00	50.0	45.8	92	74 - 126	50.0	49.5	99	8	30
Hexachlorobutadiene	87-68-3	ND	5.00	50.0	42.6	85	61 - 144	50.0	43.8	88	3	30
Isopropylbenzene (Cumene)	98-82-8	ND	5.00	50.0	48.9	98	71 - 125	50.0	51.5	103	5	30
m,p-Xylene	136777-61-2	ND	10.0	100	98.8	99	74 - 126	100	105	105	6	30
Methylene chloride	75-09-2	ND	5.00	50.0	49.3	99	68 - 132	50.0	54.0	108	9	30
Naphthalene	91-20-3	ND	5.00	50.0	44.9	90	57 - 138	50.0	51.3	103	13	35
n-Butylbenzene	104-51-8	ND	5.00	50.0	43.3	87	69 - 134	50.0	45.2	90	4	30
n-Propylbenzene	103-65-1	ND	5.00	50.0	40.0	80	75 - 129	50.0	41.7	83	4	30
o-Xylene	95-47-6	ND	5.00	50.0	51.3	103	73 - 130	50.0	55.3	111	8	30
sec-Butylbenzene	135-98-8	ND	5.00	50.0	41.5	83	70 - 136	50.0	42.9	86	3	30
Styrene	100-42-5	ND	5.00	50.0	52.1	104	71 - 127	50.0	56.5	113	8	30
tert-Butyl methyl ether (MTBE)	1634-04-4	ND	5.00	50.0	52.2	104	71 - 125	50.0	58.7	117	12	30
tert-Butylbenzene	98-06-6	ND	5.00	50.0	39.2	78	72 - 126	50.0	40.4	81	3	30

GC/MS Volatiles QC Summary

Analytical Batch 601473	Client ID	MB601473		LCS601473				LCSD601473				
	GCAL ID	1641333		1641334				1641335				
	Sample Type	MB		LCS				LCSD				
	Prep Date	NA		NA				NA				
	Analysis Date	12/23/2016 22:21		12/23/2016 20:49				12/23/2016 21:12				
	Matrix	Water		Water				Water				
EPA 8260B		Units Result	ug/L LOQ	Spike Added	Result	%R	Control Limits%R	Spike Added	Result	%R	RPD	RPD Limit
Tetrachloroethene	127-18-4	ND	5.00	50.0	49.6	99	68 - 128	50.0	51.4	103	4	30
Toluene	108-88-3	ND	5.00	50.0	45.3	91	72 - 120	50.0	49.0	98	8	20
trans-1,2-Dichloroethene	156-60-5	ND	5.00	50.0	52.4	105	69 - 132	50.0	55.2	110	5	30
trans-1,3-Dichloropropene	10061-02-6	ND	5.00	50.0	45.9	92	71 - 131	50.0	50.7	101	10	30
trans-1,4-Dichloro-2-butene	110-57-6	ND	5.00	50.0	53.2	106	56 - 132	50.0	60.1	120	12	30
Trichloroethene	79-01-6	ND	5.00	50.0	48.7	97	76 - 129	50.0	53.0	106	8	20
Trichlorofluoromethane	75-69-4	ND	5.00	50.0	46.9	94	72 - 136	50.0	48.0	96	2	30
Trichlorotrifluoroethane	76-13-1	ND	5.00	50.0	47.9	96	72 - 136	50.0	50.0	100	4	30
Vinyl chloride	75-01-4	ND	2.00	50.0	46.7	93	68 - 132	50.0	50.0	100	7	30
Xylene (total)	1330-20-7	ND	15.0	150	150	100	74 - 127	150	160	107	6	30
Surrogate												
1,2-Dichloroethane-d4	17060-07-0	48.6	97	50	50.7	101	71 - 127	50	50.2	100	NA	NA
4-Bromofluorobenzene	460-00-4	52.6	105	50	54.1	108	78 - 130	50	53.7	107	NA	NA
Dibromofluoromethane	1868-53-7	49.9	100	50	49.8	100	77 - 127	50	50.1	100	NA	NA
Toluene d8	2037-26-5	51.7	103	50	48.5	97	76 - 134	50	48.5	97	NA	NA

Analytical Batch 601529	Client ID	MB601529		LCS601529				LCSD601529				
	GCAL ID	1641518		1641519				1641520				
	Sample Type	MB		LCS				LCSD				
	Prep Date	NA		NA				NA				
	Analysis Date	12/27/2016 11:43		12/27/2016 09:02				12/27/2016 09:25				
	Matrix	Water		Water				Water				
EPA 8260B		Units Result	ug/L LOQ	Spike Added	Result	%R	Control Limits%R	Spike Added	Result	%R	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	630-20-6	ND	5.00	50.0	46.9	94	75 - 124	50.0	48.7	97	4	30
1,1,1-Trichloroethane	71-55-6	ND	5.00	50.0	48.0	96	76 - 126	50.0	51.5	103	7	30
1,1,2,2-Tetrachloroethane	79-34-5	ND	5.00	50.0	48.8	98	70 - 122	50.0	53.8	108	10	30
1,1,2-Trichloroethane	79-00-5	ND	5.00	50.0	46.9	94	72 - 121	50.0	49.8	100	6	30
1,1-Dichloroethane	75-34-3	ND	5.00	50.0	47.7	95	74 - 127	50.0	50.0	100	5	30
1,1-Dichloroethene	75-35-4	ND	5.00	50.0	47.0	94	69 - 129	50.0	49.7	99	6	20
1,1-Dichloropropene	563-58-6	ND	5.00	50.0	49.2	98	72 - 131	50.0	52.1	104	6	30
1,2,3-Trichloropropane	96-18-4	ND	5.00	50.0	44.5	89	70 - 120	50.0	49.2	98	10	30
1,2,4-Trichlorobenzene	120-82-1	ND	5.00	50.0	39.2	78	61 - 135	50.0	41.8	84	6	30
1,2,4-Trimethylbenzene	95-63-6	ND	5.00	50.0	47.1	94	74 - 125	50.0	47.7	95	1	30
1,2-Dibromo-3-chloropropane	96-12-8	ND	5.00	50.0	50.4	101	57 - 121	50.0	56.4	113	11	30
1,2-Dibromoethane	106-93-4	ND	5.00	50.0	50.6	101	70 - 124	50.0	55.4	111	9	30
1,2-Dichlorobenzene	95-50-1	ND	5.00	50.0	45.4	91	71 - 126	50.0	46.8	94	3	30
1,2-Dichloroethane	107-06-2	ND	5.00	50.0	48.2	96	71 - 129	50.0	51.9	104	7	30
1,2-Dichloroethene(Total)	540-59-0	ND	10.0	100	96.6	97	74 - 128	100	104	104	7	30
1,2-Dichloropropane	78-87-5	ND	5.00	50.0	47.2	94	72 - 128	50.0	49.4	99	5	30
1,3,5-Trimethylbenzene	108-67-8	ND	5.00	50.0	44.1	88	71 - 132	50.0	44.5	89	1	30
1,3-Dichlorobenzene	541-73-1	ND	5.00	50.0	44.4	89	74 - 126	50.0	45.3	91	2	30
1,3-Dichloropropane	142-28-9	ND	5.00	50.0	48.7	97	74 - 122	50.0	51.8	104	6	30
1,4-Dichlorobenzene	106-46-7	ND	5.00	50.0	42.6	85	72 - 122	50.0	44.5	89	4	30
2,2-Dichloropropane	594-20-7	ND	5.00	50.0	50.1	100	77 - 124	50.0	53.0	106	6	30
2-Butanone	78-93-3	ND	5.00	50.0	54.4	109	58 - 137	50.0	61.2	122	12	30
2-Chlorotoluene	95-49-8	ND	5.00	50.0	41.7	83	72 - 127	50.0	42.6	85	2	30
2-Hexanone	591-78-6	ND	5.00	50.0	60.8	122	50 - 135	50.0	68.4	**137***	12	30
4-Chlorotoluene	106-43-4	ND	5.00	50.0	45.2	90	75 - 126	50.0	45.9	92	2	30
4-Isopropyltoluene	99-87-6	ND	5.00	50.0	44.6	89	71 - 129	50.0	44.4	89	0	30
4-Methyl-2-pentanone	108-10-1	ND	5.00	50.0	53.4	107	57 - 132	50.0	59.4	119	11	30
Acetone	67-64-1	ND	5.00	50.0	53.3	107	44 - 156	50.0	59.5	119	11	30
Benzene	71-43-2	ND	5.00	50.0	47.7	95	70 - 129	50.0	50.6	101	6	20
Bromobenzene	108-86-1	ND	5.00	50.0	43.0	86	71 - 120	50.0	43.6	87	1	30
Bromochloromethane	74-97-5	ND	5.00	50.0	51.8	104	76 - 130	50.0	56.5	113	9	30
Bromodichloromethane	75-27-4	ND	5.00	50.0	47.4	95	74 - 125	50.0	50.1	100	6	30
Bromoform	75-25-2	ND	5.00	50.0	47.8	96	64 - 122	50.0	51.3	103	7	30

GC/MS Volatiles QC Summary

Analytical Batch 601529	Client ID	MB601529	LCS601529	LCSD601529
	GCAL ID	1641518	1641519	1641520
	Sample Type	MB	LCS	LCSD
	Prep Date	NA	NA	NA
	Analysis Date	12/27/2016 11:43	12/27/2016 09:02	12/27/2016 09:25
	Matrix	Water	Water	Water

EPA 8260B		Units Result	ug/L LOQ	Spike Added	Result	%R	Control Limits%R	Spike Added	Result	%R	RPD	RPD Limit
Bromomethane	74-83-9	ND	5.00	50.0	57.4	115	47 - 138	50.0	63.8	128	11	30
Carbon disulfide	75-15-0	ND	5.00	50.0	45.8	92	69 - 136	50.0	48.3	97	5	30
Carbon tetrachloride	56-23-5	ND	5.00	50.0	50.5	101	76 - 128	50.0	54.5	109	8	30
Chlorobenzene	108-90-7	ND	5.00	50.0	48.1	96	74 - 123	50.0	50.3	101	4	20
Chloroethane	75-00-3	ND	5.00	50.0	45.9	92	62 - 141	50.0	48.2	96	5	30
Chloroform	67-66-3	ND	5.00	50.0	43.7	87	75 - 122	50.0	46.4	93	6	30
Chloromethane	74-87-3	ND	5.00	50.0	52.7	105	59 - 132	50.0	55.2	110	5	30
cis-1,2-Dichloroethene	156-59-2	ND	5.00	50.0	47.6	95	73 - 130	50.0	51.6	103	8	30
cis-1,3-Dichloropropene	10061-01-5	ND	5.00	50.0	45.8	92	71 - 132	50.0	48.9	98	7	30
Dibromochloromethane	124-48-1	ND	5.00	50.0	49.3	99	71 - 123	50.0	53.2	106	8	30
Dibromomethane	74-95-3	ND	5.00	50.0	49.2	98	72 - 129	50.0	53.7	107	9	30
Dichlorodifluoromethane	75-71-8	ND	5.00	50.0	50.8	102	58 - 140	50.0	53.5	107	5	30
Ethylbenzene	100-41-4	ND	5.00	50.0	45.7	91	74 - 126	50.0	47.6	95	4	30
Hexachlorobutadiene	87-68-3	ND	5.00	50.0	39.9	80	61 - 144	50.0	41.6	83	4	30
Isopropylbenzene (Cumene)	98-82-8	ND	5.00	50.0	48.3	97	71 - 125	50.0	50.4	101	4	30
m,p-Xylene	136777-61-2	ND	10.0	100	98.7	99	74 - 126	100	101	101	2	30
Methylene chloride	75-09-2	ND	5.00	50.0	48.4	97	68 - 132	50.0	52.2	104	8	30
Naphthalene	91-20-3	ND	5.00	50.0	41.2	82	57 - 138	50.0	47.7	95	15	35
n-Butylbenzene	104-51-8	ND	5.00	50.0	43.6	87	69 - 134	50.0	42.8	86	2	30
n-Propylbenzene	103-65-1	ND	5.00	50.0	40.8	82	75 - 129	50.0	40.7	81	0	30
o-Xylene	95-47-6	ND	5.00	50.0	51.1	102	73 - 130	50.0	52.9	106	3	30
sec-Butylbenzene	135-98-8	ND	5.00	50.0	41.3	83	70 - 136	50.0	41.5	83	1	30
Styrene	100-42-5	ND	5.00	50.0	52.2	104	71 - 127	50.0	54.6	109	4	30
tert-Butyl methyl ether (MTBE)	1634-04-4	ND	5.00	50.0	51.7	103	71 - 125	50.0	55.4	111	7	30
tert-Butylbenzene	98-06-6	ND	5.00	50.0	39.4	79	72 - 126	50.0	40.3	81	2	30
Tetrachloroethene	127-18-4	ND	5.00	50.0	48.6	97	68 - 128	50.0	49.8	100	2	30
Toluene	108-88-3	ND	5.00	50.0	44.6	89	72 - 120	50.0	46.9	94	5	20
trans-1,2-Dichloroethene	156-60-5	ND	5.00	50.0	48.9	98	69 - 132	50.0	52.4	105	7	30
trans-1,3-Dichloropropene	10061-02-6	ND	5.00	50.0	44.5	89	71 - 131	50.0	48.1	96	8	30
trans-1,4-Dichloro-2-butene	110-57-6	ND	5.00	50.0	55.7	111	56 - 132	50.0	62.1	124	11	30
Trichloroethene	79-01-6	ND	5.00	50.0	46.0	92	76 - 129	50.0	48.4	97	5	20
Trichlorofluoromethane	75-69-4	ND	5.00	50.0	47.6	95	72 - 136	50.0	48.9	98	3	30
Trichlorotrifluoroethane	76-13-1	ND	5.00	50.0	48.2	96	72 - 136	50.0	48.7	97	1	30
Vinyl chloride	75-01-4	ND	2.00	50.0	47.5	95	68 - 132	50.0	50.6	101	6	30
Xylene (total)	1330-20-7	ND	15.0	150	150	100	74 - 127	150	154	103	3	30
Surrogate												
1,2-Dichloroethane-d4	17060-07-0	50.3	101	50	51.3	103	71 - 127	50	52.6	105	NA	NA
4-Bromofluorobenzene	460-00-4	49.4	99	50	52.7	105	78 - 130	50	52.5	105	NA	NA
Dibromofluoromethane	1868-53-7	51.1	102	50	48	96	77 - 127	50	49.1	98	NA	NA
Toluene d8	2037-26-5	53	106	50	48.9	98	76 - 134	50	48.4	97	NA	NA

CHAIN OF CUSTODY RECORD

GCAL ANALYTICAL LABORATORIES, LLC
7979 Innovation Park Dr., Baton Rouge, LA 70820-7402
Phone: 225.769.4900 • Fax: 225.767.5717 • www.gcal.com

Client ID: 4912 - Clearwater Environmental Resources
SDG: 216122050
PM: SAB3

Report to:
Client: Clearwater Env. Resources
Address: 3870 Pierce Ind. Blvd
Duluth GA 30096
Contact: Jack Uttle
Phone: 678-491-4601
E-mail: jack.uttle@clearwaterenv.net

Bill to:
Client:
Address: Ste 340139
SAA
Contact:
Phone:
E-mail:

P.O. Number
Project Name/Number: RAYLOC

Sampled By: Penny Fix / Clearwater

Analytical Requests & Method: VOCs via 8260

GCAL use only:
Custody Seal used ☐ yes ☐ no intact ☐ yes ☐ no
Temperature °C 2.8 E29
28 CPM

☐ Dissolved Analysis Requested
☐ Field filtered
☐ Lab filtered

Matrix[1]	Date	Time (2400)	Comp	Grab	Sample Description	No Containers	VOCs via 8260	Preservative
W	12/16	1054		X	MW-7@30'	3	X	1
	12/15	1125		X	MW-12@60'	3	X	2
	12/16	1006		X	MW-15@30'	3	X	3
	12/15	1405		X	MW-17@30'	3	X	4
	12/15	1437		X	MW-19@30'	3	X	5
	12/15	1007		X	MW-20@60'	3	X	6
	12/16	1329		X	MW-21@60'	3	X	7
	12/16	1237		X	MW-22@60'	3	X	8
	12/16	1153		X	MW-23@60'	3	X	9
	12/15	1208		X	MW-24@30'	3	X	10
	12/15	0919		X	PT-3@60'	3	X	11

Air Bill No: 7779 8739 7464

Turn Around Time (Business Days): ☐ 24h* ☐ 48h* ☐ 3 days* ☐ 1 week* ☑ Standard (Per Contract/Quote)

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
	12/16	0945	HUGO ANEZ	12/19/16	9:45
Brad Tucker	12/19/16	1300	FEDEX		
FedEx	12.20.16	11:05		12.20.16	11:05

Note:

By submitting these samples, you agree to GCAL's terms and conditions contained in our most recent schedule of services.

Matrix[1]: W = water, S = solid, L = liquid, T = tissue

*Requires prior approval, rush charges may apply.

We cannot accept verbal changes. Please email written changes to your PM.

WHITE: CLIENT FINAL REPORT - CANARY: CLIENT

SAMPLE RECEIVING CHECKLIST

* 2 1 6 1 2 2 0 5 0 *

SAMPLE DELIVERY GROUP 216122050

Client PM SAB3 4912 - Clearwater Environmental Resources	**Transport Method** FEDEX
Profile Number 259985	**Received By** Reese, Sean M.
Line Item(s) 1 - VOC	**Receive Date(s)** 12/20/16

CHECKLIST	YES	NO	NA
Samples received with proper thermal and chemical preservation?	☑	☐	☐
Radioactivity is <1600 cmp? If no, record cmp value in notes section.	☑	☐	☐
Custody seals present and intact?	☑	☐	☐
COC relinquished and complete (including sample IDs, collect dates/times, and sampler name)?	☑	☐	☐
Short holds or RUSH samples received?	☐	☑	☐
All containers received in good condition and within hold time?	☑	☐	☐
All sample labels and containers received match the chain of custody?	☑	☐	☐
Preservation checked at receipt? Exceptions: VOC, Coliform, TOC, Oil and Grease, DOC	☐	☐	☑
Preservative added to any containers?	☐	☑	☐
VOC water containers received with headspace < 6mm?	☑	☐	☐
Received filtered sample volume for dissolved analysis?	☐	☐	☑
Trip blank present in all coolers containing VOC waters?	☐	☑	☐
Samples collected in containers provided by GCAL?	☐	☑	☐

COOLERS

Airbill	Thermometer ID: E29	Temp(°C)
		2.8

DISCREPANCIES

None

LAB PRESERVATIONS

None

NOTES

Revision 1.5

APPENDIX C
DECEMBER 2016 GROUNDWATER SAMPLING LOGS

Clearwater Environmental Resources, LLC

GROUNDWATER SAMPLING LOG

SITE NAME: RAYLOC		SITE LOCATION: CREEK
WELL NO: MW-7	SAMPLE ID: MW-7@30'	DATE: 12/16/16

PURGING DATA

WELL DIAMETER (in.): 2	TOTAL WELL DEPTH (ft):	STATIC DEPTH TO WATER (ft): 27.62	WELL CAPACITY (gal/ft):

1 WELL VOLUME (gal) = (TOTAL WELL DEPTH - DEPTH TO WATER) X WELL CAPACITY = 0.658

PURGE METHOD: Bladder Pump	PURGE INITIATED AT: 1025	PURGE ENDED AT: 1047	TOTAL VOL PURGED (gal): ~0.375

TIME	VOLUME PURGED (gal)	CUML. VOLUME PURGED (gal)	PURGE RATE (gpm)	DEPTH TO WATER (ft)	pH	TEMP (°c)	COND. (mS/cm)	DO (mg/L)	ORP (millivolts)	TURB. (NTUs)	
1035	0.25	0.25	<0.1	27.65	5.18	12.45	0.058	2.46	160.3	261	
1041	~0.125	~0.375	<0.1	"	5.16	12.71	0.057	1.93	171.1	166	
1044	~0.125	~.375	<0.1	"	5.17	13.62	0.057	1.61	175.6	131	
1047	~0.125	~0.375	<0.1	"	5.16	13.29	0.057	1.54	182.1	132	

WELL CAPACITY (gal/ft): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06;2"=0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

Pump Type: Bladder Pump	Tubing Type: PE

SAMPLING DATA

SAMPLED BY (PRINT): Penny Fritz / Ulcometer	SAMPLER(S) SIGNATURE(S):

SAMPLING METHOD(S): Bladder Pump	SAMPLING INITIATED AT: 1048	SAMPLING ENDED AT: 1054
FIELD DECON: Y (N)	FIELD FILTERED: Y (N)	DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION			SAMPLE PRESERVATION	
NO.	MAT'L CODE	VOLUME	PRESERVATIVE USED	INTENDED ANALYSIS AND/OR METHOD
3	CG	40mL	HCl	VOCs

Groundwater Parameter Tolerances (if possible):

Turbidity: <10 NTUs
Temperature: +/- 5 °F
pH: +/- 0.1 Units
Specific Conductance: +/- 5%

MATERIAL CODES: AG=AMBER GLASS; CG=CLEAR GLASS; PE=POLYETHYLENE; O=OTHER (SPECIFY)

REMARKS:

Clearwater Environmental Resources, LLC

GROUNDWATER SAMPLING LOG

SITE NAME: RAYLOC		SITE LOCATION: RAILROAD
WELL NO: MW-12	SAMPLE ID: MW-12 CGO	DATE: 12/15/16

PURGING DATA

WELL DIAMETER (in.): 2	TOTAL WELL DEPTH (ft): 96'	STATIC DEPTH TO WATER (ft): 29.11	WELL CAPACITY (gal/ft):

1 WELL VOLUME (gal) = (TOTAL WELL DEPTH - DEPTH TO WATER) X WELL CAPACITY = 0.658

PURGE METHOD: Bladder Pump	PURGE INITIATED AT: 1033	PURGE ENDED AT: 1112	TOTAL VOL PURGED (gal): ~0.375

TIME	VOLUME PURGED (gal)	CUML. VOLUME PURGED (gal)	PURGE RATE (gpm)	DEPTH TO WATER (ft)	pH	TEMP (°c)	COND. (mS/cm)	DO (mg/L)	ORP (millivolts)	TURB. (NTUs)	
1100	0.25	0.25	<0.1	29.12	5.44	8.70	0.060	6.30	193.0	386	
1106	~0.125	~0.25	<0.1	"	5.42	9.46	0.059	5.39	202.6	520	
1109	~0.125	~0.125	<0.1	"	5.41	9.93	0.059	5.29	209.9	594	
1112	~0.125	~0.125	<0.1	"	5.40	10.57	0.043	5.10	207.6	~~207~~ 609	

WELL CAPACITY (gal/ft): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06;2"=0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

Pump Type: Bladder Pump **Tubing Type:** PE

SAMPLING DATA

SAMPLED BY (PRINT): Pam Fox / Clearwater	SAMPLER(S) SIGNATURE(S):	
SAMPLING METHOD(S): Bladder Pump	SAMPLING INITIATED AT: 1113	SAMPLING ENDED AT: 1125
FIELD DECON: Y (N)	FIELD FILTERED: Y (N)	DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION			SAMPLE PRESERVATION	INTENDED ANALYSIS AND/OR METHOD
NO.	MAT'L CODE	VOLUME	PRESERVATIVE USED	
3	CG	40 mL	HCl	VOCs

Groundwater Parameter Tolerances (if possible):

Turbidity: <10 NTUs
Temperature: +/- 5 °F
pH: +/- 0.1 Units
Specific Conductance: +/- 5%

MATERIAL CODES: AG=AMBER GLASS; CG=CLEAR GLASS; PE=POLYETHYLENE; O=OTHER (SPECIFY)

REMARKS:

Clearwater Environmental Resources, LLC

GROUNDWATER SAMPLING LOG

SITE NAME: RAYLOC		SITE LOCATION: CREEK
WELL NO: MW-15	SAMPLE ID: MW-15 @ 30'	DATE: 12/16/16

PURGING DATA

WELL DIAMETER (in.): 2	TOTAL WELL DEPTH (ft): 40'	STATIC DEPTH TO WATER (ft): 9.80	WELL CAPACITY (gal/ft):

1 WELL VOLUME (gal) = (TOTAL WELL DEPTH - DEPTH TO WATER) X WELL CAPACITY = 0.658

PURGE METHOD: Bladder Pump	PURGE INITIATED AT: 0940	PURGE ENDED AT: 0958	TOTAL VOL PURGED (gal): ~0.375

TIME	VOLUME PURGED (gal)	CUML. VOLUME PURGED (gal)	PURGE RATE (gpm)	DEPTH TO WATER (ft)	pH	TEMP (°c)	COND. (mS/cm)	DO (mg/L)	ORP (millivolts)	TURB. (NTUs)	
0949	0.25	0.25	<0.1	9.82	4.89	12.78	0.117	2.76	143.1	7999	
0952	~0.125	~0.375	<0.1	"	4.88	13.43	0.116	1.77	151.5	7999	
0955	~0.125	~0.375	<0.1	"	4.88	14.37	0.115	1.21	161.0	7999	
0958	~0.125	~0.375	<0.1	"	4.86	15.07	0.115	0.82	172.1	7999	

WELL CAPACITY (gal/ft): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06;2"=0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

Pump Type: Bladder Pump **Tubing Type:** PE

SAMPLING DATA

SAMPLED BY (PRINT): Penny Fritz / Clearwater	SAMPLER(S) SIGNATURE(S):	
SAMPLING METHOD(S): Bladder Pump	SAMPLING INITIATED AT: 0959	SAMPLING ENDED AT: 1006
FIELD DECON: Y (N)	FIELD FILTERED: Y (N)	DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION			SAMPLE PRESERVATION	
NO.	MAT'L CODE	VOLUME	PRESERVATIVE USED	INTENDED ANALYSIS AND/OR METHOD
3	CG	40 mL	HCl	VOCs

Groundwater Parameter Tolerances (if possible):

Turbidity: <10 NTUs
Temperature: +/- 5 °F
pH: +/- 0.1 Units
Specific Conductance: +/- 5%

MATERIAL CODES: AG=AMBER GLASS; CG=CLEAR GLASS; PE=POLYETHYLENE; O=OTHER (SPECIFY)

REMARKS:

Clearwater Environmental Resources, LLC

GROUNDWATER SAMPLING LOG

SITE NAME: RAYLOC		SITE LOCATION: CREEK
WELL NO: MW-17	SAMPLE ID: MW-17C 30'	DATE: 12/15/16

PURGING DATA

WELL DIAMETER (in.): 2	TOTAL WELL DEPTH (ft): 31'	STATIC DEPTH TO WATER (ft): 8.76	WELL CAPACITY (gal/ft):

1 WELL VOLUME (gal) = (TOTAL WELL DEPTH - DEPTH TO WATER) X WELL CAPACITY = 0.658

PURGE METHOD: Bladder Pump	PURGE INITIATED AT: 1335	PURGE ENDED AT: 1358	TOTAL VOL PURGED (gal): ~0.375

TIME	VOLUME PURGED (gal)	CUML. VOLUME PURGED (gal)	PURGE RATE (gpm)	DEPTH TO WATER (ft)	pH	TEMP (°c)	COND. (mS/cm)	DO (mg/L)	ORP (millivolts)	TURB. (NTUs)	
1345	0.25	0.25	<0.1	8.76	6.17	13.41	0.134	2.59	158.7	623	
1349	~0.125	~0.375	<0.1	"	6.18	13.36	0.135	1.98	159.7	7999	
1352	~0.125	~0.375	<0.1	"	6.18	14.12	0.134	1.23	159.7	7999	
1355	~0.125	~0.375	<0.1	"	6.16	14.72	0.134	1.16	160.3	7999	
1358	~0.125	~0.375	<0.1	"	6.16	14.68	0.135	1.05	162.2	7999	

WELL CAPACITY (gal/ft): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06;2"=0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

Pump Type: Bladder Pump	Tubing Type: PE

SAMPLING DATA

SAMPLED BY (PRINT): P. Frey / Clearwater	SAMPLER(S) SIGNATURE(S):	
SAMPLING METHOD(S): Bladder Pump	SAMPLING INITIATED AT: 1359	SAMPLING ENDED AT: 1405
FIELD DECON: Y (N)	FIELD FILTERED: Y (N)	DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION			SAMPLE PRESERVATION	INTENDED ANALYSIS AND/OR METHOD
NO.	MAT'L CODE	VOLUME	PRESERVATIVE USED	
3	CG	40mL	HCl	VOCs

Groundwater Parameter Tolerances (if possible):

Turbidity: <10 NTUs
Temperature: +/- 5 °F
pH: +/- 0.1 Units
Specific Conductance: +/- 5%

MATERIAL CODES: AG=AMBER GLASS; CG=CLEAR GLASS; PE=POLYETHYLENE; O=OTHER (SPECIFY)

REMARKS:

Clearwater Environmental Resources, LLC

GROUNDWATER SAMPLING LOG

SITE NAME: RAYLOC		SITE LOCATION: CREEK
WELL NO: MW-19	SAMPLE ID: MW-19 @ 30	DATE: 12/15/16

PURGING DATA

WELL DIAMETER (in.): 2	TOTAL WELL DEPTH (ft): 35'	STATIC DEPTH TO WATER (ft): 8.59	WELL CAPACITY (gal/ft):

1 WELL VOLUME (gal) = (TOTAL WELL DEPTH - DEPTH TO WATER) X WELL CAPACITY = 0.658

PURGE METHOD: Bladder Pump	PURGE INITIATED AT: 1414	PURGE ENDED AT: 1429	TOTAL VOL PURGED (gal): ~0.375

TIME	VOLUME PURGED (gal)	CUML. VOLUME PURGED (gal)	PURGE RATE (gpm)	DEPTH TO WATER (ft)	pH	TEMP (°c)	COND. (mS/cm)	DO (mg/L)	ORP (millivolts)	TURB. (NTUs)	
1422	0.25	0.25	<0.1	8.66	6.20	14.17	0.276	1.04	-5.7	258	
1426	no.125	no.375	<0.1	"	6.20	14.32	0.277	0.95	-9.2	242	
1429	no.125	no.375	<0.1	"	6.20	14.44	0.278	0.80	-11.8	188	
	~~no.125~~	~~no.375~~	~~<0.1~~	"							

WELL CAPACITY (gal/ft): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06;2"=0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

Pump Type: Bladder Pump **Tubing Type:** PE

SAMPLING DATA

SAMPLED BY (PRINT): P.Fox / Clearwater	SAMPLER(S) SIGNATURE(S):	
SAMPLING METHOD(S): Bladder Pump	SAMPLING INITIATED AT: 1429	SAMPLING ENDED AT: 1437
FIELD DECON: Y (N)	FIELD FILTERED: Y (N)	DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION			SAMPLE PRESERVATION	
NO.	MAT'L CODE	VOLUME	PRESERVATIVE USED	INTENDED ANALYSIS AND/OR METHOD
3	CG	40mL	HCl	VOCs

Groundwater Parameter Tolerances (if possible):

Turbidity: <10 NTUs
Temperature: +/- 5 °F
pH: +/- 0.1 Units
Specific Conductance: +/- 5%

MATERIAL CODES: AG=AMBER GLASS; CG=CLEAR GLASS; PE=POLYETHYLENE; O=OTHER (SPECIFY)

REMARKS:

Clearwater Environmental Resources, LLC

GROUNDWATER SAMPLING LOG

SITE NAME: RAYLOC		SITE LOCATION: FCHA
WELL NO: MW-20	SAMPLE ID: MW-20 @60'	DATE: 12/15/16

PURGING DATA

WELL DIAMETER (in.): 2	TOTAL WELL DEPTH (ft): 70'	STATIC DEPTH TO WATER (ft): 24.45	WELL CAPACITY (gal/ft):

1 WELL VOLUME (gal) = (TOTAL WELL DEPTH - DEPTH TO WATER) X WELL CAPACITY = 0.658

PURGE METHOD: Bladder Pump	PURGE INITIATED AT: 0932	PURGE ENDED AT: 0958	TOTAL VOL PURGED (gal): ~0.37

TIME	VOLUME PURGED (gal)	CUML. VOLUME PURGED (gal)	PURGE RATE (gpm)	DEPTH TO WATER (ft)	pH	TEMP (°c)	COND. (mS/cm)	DO (mg/L)	ORP (millivolts)	TURB. (NTUs)	
0948	0.25	0.25	<0.1	24.45	6.21	9.82	0.082	6.30	141.4	220	
0954	~0.125	~0.37	<0.1	"	6.18	9.65	0.081	6.18	150.7	213	
0957	~0.125	~0.50	<0.1	"	6.17	9.66	0.081	6.15	153.1	229	

WELL CAPACITY (gal/ft): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06;2"=0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

Pump Type: Bladder Pump	Tubing Type: PE

SAMPLING DATA

SAMPLED BY (PRINT): Ryan Fox / Alexander	SAMPLER(S) SIGNATURE(S):

SAMPLING METHOD(S): Bladder Pump	SAMPLING INITIATED AT: 0959	SAMPLING ENDED AT: 1007
FIELD DECON: Y (N)	FIELD FILTERED: Y (N)	DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION			SAMPLE PRESERVATION	INTENDED ANALYSIS AND/OR METHOD
NO.	MAT'L CODE	VOLUME	PRESERVATIVE USED	
3	CG	40mL	HCl	VOCs

Groundwater Parameter Tolerances (if possible):
Turbidity: <10 NTUs
Temperature: +/- 5 °F
pH: +/- 0.1 Units
Specific Conductance: +/- 5%

MATERIAL CODES: AG=AMBER GLASS; CG=CLEAR GLASS; PE=POLYETHYLENE; O=OTHER (SPECIFY)

REMARKS:

Clearwater Environmental Resources, LLC

GROUNDWATER SAMPLING LOG

SITE NAME: RAYLOC		SITE LOCATION: SOURCE AREA
WELL NO: MW-21	SAMPLE ID: MW-21 CGG'	DATE: 12/16/16

PURGING DATA

WELL DIAMETER (in.): 2	TOTAL WELL DEPTH (ft): 75'	STATIC DEPTH TO WATER (ft): 48.13	WELL CAPACITY (gal/ft):

1 WELL VOLUME (gal) = (TOTAL WELL DEPTH - DEPTH TO WATER) X WELL CAPACITY = 0.658

PURGE METHOD: Bladder Pump	PURGE INITIATED AT: 1252	PURGE ENDED AT:	TOTAL VOL PURGED (gal):

	TIME	VOLUME PURGED (gal)	CUML. VOLUME PURGED (gal)	PURGE RATE (gpm)	DEPTH TO WATER (ft)	pH	TEMP (°c)	COND. (mS/cm)	DO (mg/L)	ORP (millivolts)	TURB. (NTUs)	
1311	~~1307~~	0.25	0.25	<0.1	48.16	6.97	13.47	0.084	~~0.084~~ SF 4.92 NR	26.0	32.3	
	1314	~0.125	~0.375	<0.1	"	7.06	13.97	0.084	~~0.084~~ 4.92	27.8	23.6	
	1317	~0.125	~0.375	<0.1	"	7.09	14.87	0.084	4.67	42.3	25.4	
	1320	~0.125	~0.775	<0.1	"	7.06	15.41	0.084	4.52	50.5	16.8	

WELL CAPACITY (gal/ft): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06;2"=0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

Pump Type: Bladder Pump	Tubing Type: PE

SAMPLING DATA

SAMPLED BY (PRINT): Perry Frith / Clearwater	SAMPLER(S) SIGNATURE(S):	
SAMPLING METHOD(S): Bladder Pump	SAMPLING INITIATED AT: 1324	SAMPLING ENDED AT: 1329
FIELD DECON: Y (N)	FIELD FILTERED: Y (N)	DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION			SAMPLE PRESERVATION	
NO.	MAT'L CODE	VOLUME	PRESERVATIVE USED	INTENDED ANALYSIS AND/OR METHOD
3	CG	40 mL	HCl	VOCs

Groundwater Parameter Tolerances (if possible):

Turbidity: <10 NTUs
Temperature: +/- 5 °F
pH: +/- 0.1 Units
Specific Conductance: +/- 5%

MATERIAL CODES: AG=AMBER GLASS; CG=CLEAR GLASS; PE=POLYETHYLENE; O=OTHER (SPECIFY)

REMARKS:

Clearwater Environmental Resources, LLC

GROUNDWATER SAMPLING LOG

SITE NAME: RAYLOC		SITE LOCATION: SOURCE AREA
WELL NO: MW-22	SAMPLE ID: MW-22@60'	DATE: 12/16/16

PURGING DATA

WELL DIAMETER (in.): 2	TOTAL WELL DEPTH (ft): 70'	STATIC DEPTH TO WATER (ft): 45.29	WELL CAPACITY (gal/ft):

1 WELL VOLUME (gal) = (TOTAL WELL DEPTH - DEPTH TO WATER) X WELL CAPACITY = 0.658

PURGE METHOD: Bladder Pump	PURGE INITIATED AT: 1205	PURGE ENDED AT: 1229	TOTAL VOL PURGED (gal): ~0.375

TIME	VOLUME PURGED (gal)	CUML. VOLUME PURGED (gal)	PURGE RATE (gpm)	DEPTH TO WATER (ft)	pH	TEMP (°c)	COND. (mS/cm)	DO (mg/L)	ORP (millivolts)	TURB. (NTUs)	
1223	~0.25	0.25	<0.1	45.32	5.33	15.41	0.071	2.30	158.3	300	
1226	~0.125	~0.375	<0.1	"	5.33	15.54	0.069	2.22	155.=	291	
1229	~0.125	~0.375	<0.1	"	5.32	15.72	0.069	2.08	155.3	276	

WELL CAPACITY (gal/ft): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06;2"=0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

Pump Type: Bladder Pump	Tubing Type: PE

SAMPLING DATA

SAMPLED BY (PRINT): P. Friz / Clearwater	SAMPLER(S) SIGNATURE(S):	
SAMPLING METHOD(S): Bladder Pump	SAMPLING INITIATED AT: 1230	SAMPLING ENDED AT: 1237
FIELD DECON: Y (N)	FIELD FILTERED: Y (N)	DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION			SAMPLE PRESERVATION	INTENDED ANALYSIS AND/OR METHOD
NO.	MAT'L CODE	VOLUME	PRESERVATIVE USED	
3	CG	40mL	HCl	VOCs

Groundwater Parameter Tolerances (if possible):

Turbidity: <10 NTUs
Temperature: +/- 5 °F
pH: +/- 0.1 Units
Specific Conductance: +/- 5%

MATERIAL CODES: AG=AMBER GLASS; CG=CLEAR GLASS; PE=POLYETHYLENE; O=OTHER (SPECIFY)

REMARKS:

Clearwater Environmental Resources, LLC

GROUNDWATER SAMPLING LOG

SITE NAME: RAYLOC		SITE LOCATION: SOURCE AREA
WELL NO: MW-23	SAMPLE ID: MW-23 C 60'	DATE: 12/16/16

PURGING DATA

WELL DIAMETER (in.): 2	TOTAL WELL DEPTH (ft): 64'	STATIC DEPTH TO WATER (ft): 50.82	WELL CAPACITY (gal/ft):
1 WELL VOLUME (gal) = (TOTAL WELL DEPTH - DEPTH TO WATER) X WELL CAPACITY = 0.658			
PURGE METHOD: Bladder Pump	PURGE INITIATED AT: 1125	PURGE ENDED AT:	TOTAL VOL PURGED (gal):

TIME	VOLUME PURGED (gal)	CUML. VOLUME PURGED (gal)	PURGE RATE (gpm)	DEPTH TO WATER (ft)	pH	TEMP (°c)	COND. (mS/cm)	DO (mg/L)	ORP (millivolts)	TURB. (NTUs)	
1138	0.25	0.25	<0.1	50.84	5.36	10.57	0.406	4.76	167.3	632	
1141	~0.125	~0.375	<0.1	"	5.34	11.06	0.410	3.43	181.7	620	
1146	~0.125	~0.375	<0.1	"	5.33	12.16	0.415	1.65	200.1	573	

WELL CAPACITY (gal/ft): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06;2"=0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

Pump Type: Bladder Pump **Tubing Type:** PE

SAMPLING DATA

SAMPLED BY (PRINT): Perry Fritz / Clearwater	SAMPLER(S) SIGNATURE(S): [signature]	
SAMPLING METHOD(S): Bladder Pump	SAMPLING INITIATED AT: 1147	SAMPLING ENDED AT: 1153
FIELD DECON: Y (N)	FIELD FILTERED: Y (N)	DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION			SAMPLE PRESERVATION	INTENDED ANALYSIS AND/OR METHOD
NO.	MAT'L CODE	VOLUME	PRESERVATIVE USED	
3	CG	40 mL	HCl	VOCs

Groundwater Parameter Tolerances (if possible):
Turbidity: <10 NTUs
Temperature: +/- 5 °F
pH: +/- 0.1 Units
Specific Conductance: +/- 5%

MATERIAL CODES: AG=AMBER GLASS; CG=CLEAR GLASS; PE=POLYETHYLENE; O=OTHER (SPECIFY)

REMARKS:

Clearwater Environmental Resources, LLC

GROUNDWATER SAMPLING LOG

SITE NAME: RAYLOC		SITE LOCATION: RAILROAD	
WELL NO: MW-24	SAMPLE ID: MW-24 @ 30'		DATE: 12/15/16

PURGING DATA

WELL DIAMETER (in.): 2	TOTAL WELL DEPTH (ft):	STATIC DEPTH TO WATER (ft): 24.66 ~~24.79~~	WELL CAPACITY (gal/ft):

1 WELL VOLUME (gal) = (TOTAL WELL DEPTH - DEPTH TO WATER) X WELL CAPACITY = 0.658

PURGE METHOD: Bladder Pump	PURGE INITIATED AT: 1135	PURGE ENDED AT: 1201	TOTAL VOL PURGED (gal): ~0.375

TIME	VOLUME PURGED (gal)	CUML. VOLUME PURGED (gal)	PURGE RATE (gpm)	DEPTH TO WATER (ft)	pH	TEMP (°c)	COND. (mS/cm)	DO (mg/L)	ORP (millivolts)	TURB. (NTUs)	
1154	0.25	0.25	0.1	24.79	5.40	11.39	0.160	4.79	208.2	81	
1157	~0.125	~0.375	0.1	"	5.39	11.19	0.163	4.45	211.3	78	
1201	~0.125	~0.375	0.1	"	5.39	11.19	0.163	4.32	212.4	80	

WELL CAPACITY (gal/ft): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06;2"=0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

Pump Type: Bladder Pump	Tubing Type: PE

SAMPLING DATA

SAMPLED BY (PRINT): P. Fox / Clearwater	SAMPLER(S) SIGNATURE(S):	
SAMPLING METHOD(S): Bladder Pump	SAMPLING INITIATED AT: 1202	SAMPLING ENDED AT: 1208
FIELD DECON: Y (N)	FIELD FILTERED: Y (N)	DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION			SAMPLE PRESERVATION	INTENDED ANALYSIS AND/OR METHOD
NO.	MAT'L CODE	VOLUME	PRESERVATIVE USED	
3	CG	40mL	HCl	VOCs

Groundwater Parameter Tolerances (if possible):

Turbidity: <10 NTUs
Temperature: +/- 5 °F
pH: +/- 0.1 Units
Specific Conductance: +/- 5%

MATERIAL CODES: AG=AMBER GLASS; CG=CLEAR GLASS; PE=POLYETHYLENE; O=OTHER (SPECIFY)

REMARKS:

Clearwater Environmental Resources, LLC

GROUNDWATER SAMPLING LOG

SITE NAME: RAYLOC		SITE LOCATION: FCHA
WELL NO: PT-3	SAMPLE ID: PT-3C60'	DATE: 12/15/16

PURGING DATA

WELL DIAMETER (in.): 2	TOTAL WELL DEPTH (ft): 67.6'	STATIC DEPTH TO WATER (ft): 24.63	WELL CAPACITY (gal/ft):

1 WELL VOLUME (gal) = (TOTAL WELL DEPTH - DEPTH TO WATER) X WELL CAPACITY = 0.658

PURGE METHOD: Bladder Pump	PURGE INITIATED AT: 0835	PURGE ENDED AT: 0913	TOTAL VOL PURGED (gal): ~0.375

TIME	VOLUME PURGED (gal)	CUML. VOLUME PURGED (gal)	PURGE RATE (gpm)	DEPTH TO WATER (ft)	pH	TEMP (°c)	COND. (mS/cm)	DO (mg/L)	ORP (millivolts)	TURB. (NTUs)	
0859	0.25	0.25	<0.1	24.40	6.29	9.21	0.152	4.60	197.2	77	
0903	~0.125	~0.375	<0.1	24.40	6.25	12.03	0.133	3.62	165.6	93	
0908	~0.125	~0.375	<0.1	24.40	6.24	12.19	0.132	3.88	149.7	90	
0913	~0.125	~0.375	<0.1	"	6.22	11.92	0.131	3.40	138.2	101	

WELL CAPACITY (gal/ft): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06;2"=0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

Pump Type: Bladder Pump	Tubing Type: PE

SAMPLING DATA

SAMPLED BY (PRINT): Perry Fox / Clearwater	SAMPLER(S) SIGNATURE(S):

SAMPLING METHOD(S): Bladder Pump	SAMPLING INITIATED AT: 0914	SAMPLING ENDED AT: 0919
FIELD DECON: Y (N)	FIELD FILTERED: Y (N)	DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION			SAMPLE PRESERVATION	INTENDED ANALYSIS AND/OR METHOD
NO.	MAT'L CODE	VOLUME	PRESERVATIVE USED	
3	CG	40 mL	HCl	VOCs

Groundwater Parameter Tolerances (if possible):

Turbidity: <10 NTUs
Temperature: +/- 5 °F
pH: +/- 0.1 Units
Specific Conductance: +/- 5%

MATERIAL CODES: AG=AMBER GLASS; CG=CLEAR GLASS; PE=POLYETHYLENE; O=OTHER (SPECIFY)

REMARKS:

APPENDIX D
X_2 REMEDIAL SYSTEM REPORT

VRP Groundwater Remediation Progress Report

Project: Former Rayloc Facility

600 Rayloc Drive

Atlanta, GA 30336

For: **Mr. Jack Wintle, P.G.**

Clearwater Environmental Resources, LLC

3870 Peachtree Ind. Blvd.

Suite 340139

Duluth, GA 30096

April 5, 2017

OVERVIEW

This report provides a technical summary of groundwater remedial operations during the period September 2016 through January 2017. There was a significant reduction in PCE concentrations throughout the source area, a moderate decrease in the downgradient zone Area 2, and small increase in the offsite Area 3. However, there was substantial generation of CIS-1,2 Dichloroethene daughter product in Area 2, indicating that a high level of reduction is occurring as greater mass of PCE migrates into the area.

During this reporting period, the injection and monitoring wells associated with the groundwater treatment system were cleaned. Distribution tubing and fittings were inspected and replaced as necessary. During this period, the gas injection system operated continuously, with hydrogen being pulsed at 2.5% to minimize interference from methane production.

In January 2017 ISCO injections commenced in 6 source are wells using sodium persulfate. The wells included A1-I1, A1-I2, A1-I7, A1-I8, A1-I9, and A1-I10. Each of the 6 wells is injected with 750 gallons of reagent per month; each batch is 125 gallons and is completed within a 24-hour period. Results to date have shown no increase in groundwater elevations during the ISCO injections, and no adverse impacts have been observed. The intent of this work in the source area is to both oxidize the PCE and daughter products present, and as well as provide for enhanced biodegradation down gradient.

Table 1. % Change in Key Parameters

MW	% PCE	% TCE	% Cis-1,2
MW-21	90.9	0.0	0.0
MW-22	82.3	53.3	-25.4
MW-23	52.7	-17.4	36.9
MW-12	48.4	-73.1	44.5
MW-20	12.5	-95.6	-20.9
PT-3	25.0	3.0	2.8
MW-24	-1.2	-89.2	-94.4
MW-15	0.0	0.0	100.0
MW-17	-54.9	-61.9	2.4
MW-19	0.0	100.0	89.1

SOURCE AREA

The perimeter of the primary source area (Area 1) is monitored by 3 deep wells MW-21,22,23. There are presently 12 groundwater injection wells that deliver gas phase reagents and liquid chemical reagent to this zone. The percent change in key parameters is presented in Table 1 above; note that positive numbers indicate a decrease from the prior period, while a negative value reflects an increase. There was substantial reduction of PCE mass in the source area during this period. MW-22 revealed a significant increase of CIS-1,2 daughter product, indicating a higher level of reductive dichlorination. The trends in PCE, TCE and Cis-1,2 daughter products are presented graphically in Exhibits 1-3 respectively.

AREA 2 – DOWN GRADIENT

The treatment zone immediately down gradient of the source area (Area 2) is an abandoned railroad right of way. Prior pilot studies with various technologies were conducted in Area 2. During this period, moderate reductions in PCE occurred with concurrent increases in TCE, indicated enhanced reductive activity. Recent maintenance work on the injection system appears to have improved the effectiveness in the area of MW-12.

OFF SITE AREA 3

This area is located adjacent to a Chattahoochee River tributary creek south of Wendell Drive, and down gradient from the source area. It is monitored by MW-15,17,19. There are 4 groundwater injections wells in a linear array between MW-17 and MW-19. This area is influenced by the near surface hydrology. The gas injection system in this area has operated continuously during the current period. There was little change in conditions in Area 3 during this period; it is assumed that MW-17 is in the path of an up gradient source of PCE. MW-19 is down gradient of the injection wells in this area and has been consistently free of PCE.

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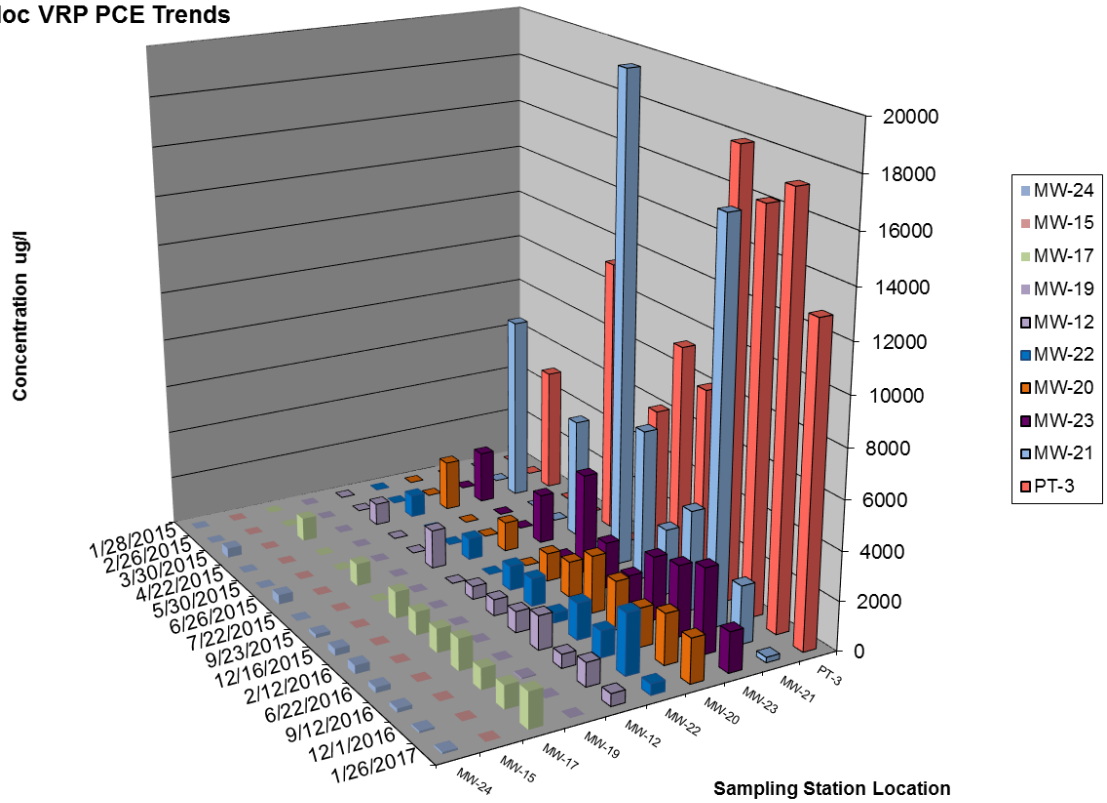
Exhibit 1. Rayloc VRP PCE Trends



ENVIRONMENTAL CONTRACTING, INC

Exhibit 2. Rayloc VRP Cis 1,2 Dichloroethene Trends

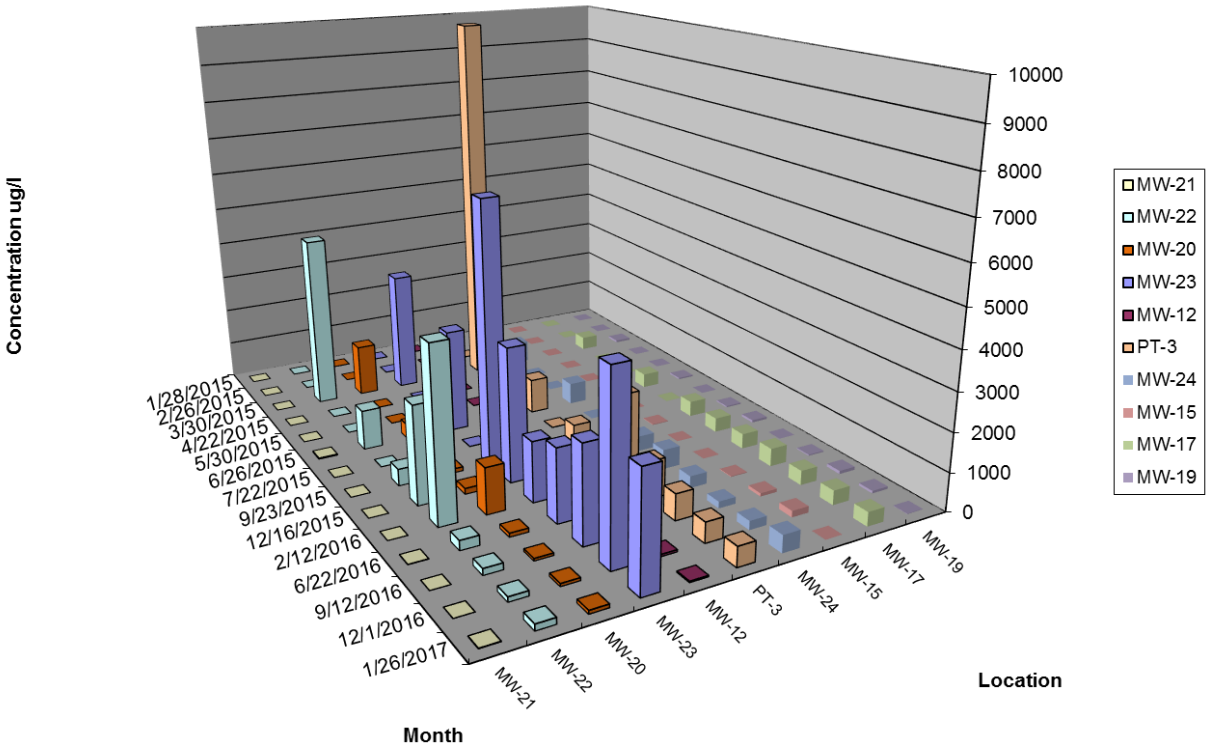
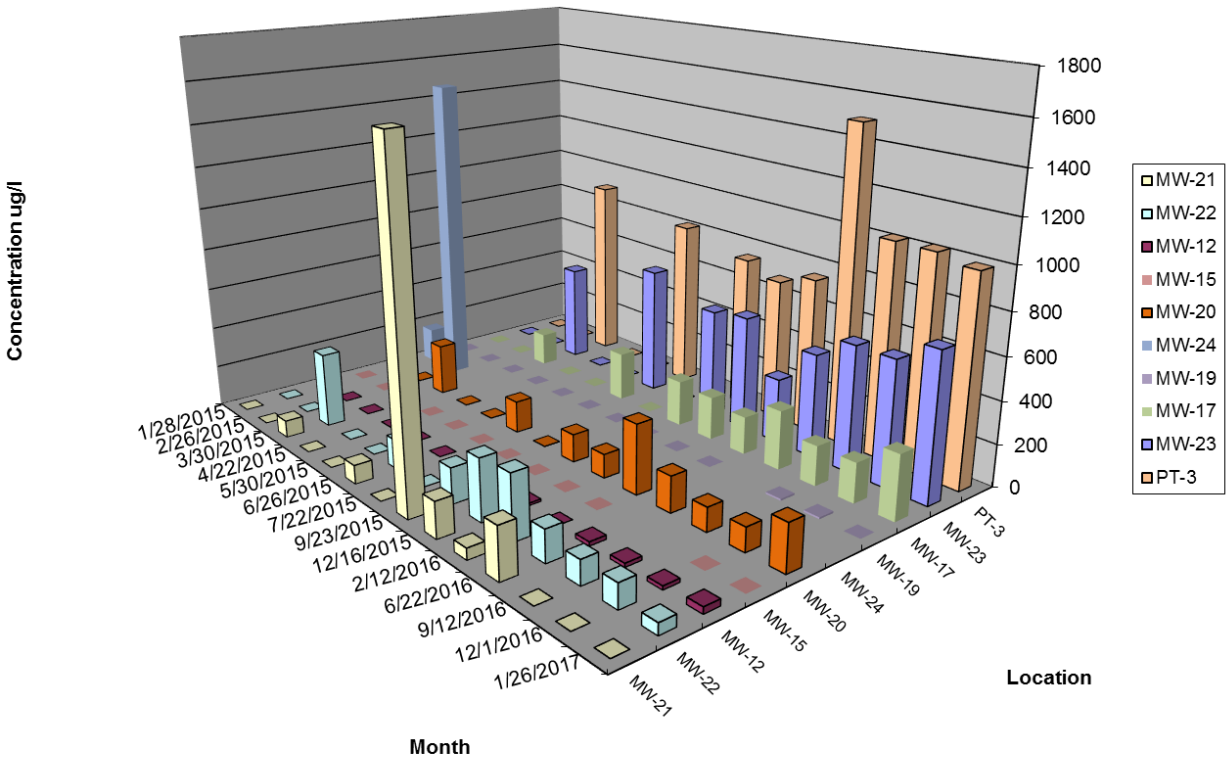


Exhibit 3. Rayloc VRP TCE Trends



ENVIRONMENTAL CONTRACTING, INC

Soil Remediation Status Report

Parts Disassembly Area

Project: Former Rayloc Facility

600 Rayloc Drive

Atlanta, GA 30336

For: **Mr. Jack Wintle, P.G.**

Clearwater Environmental Resources, LLC

3870 Peachtree Ind. Blvd.

Suite 340139

Duluth, GA 30096

April 4, 2017

OVERVIEW

This report provides an update on the status of remediation operations in the parts Disassembly Area (PDA) at the former Rayloc Facility. Since March 2016 90 % of the PCE mass in the treatment zone has been reduced. The existing treatment program consists of the original SVE system and ISCO injection via 7 well points using sodium persulfate and hydrogen peroxide. During the period March 2016 through December 2016, an ISCO pilot study was performed using these same reagents in 3 injection wells. Based on the successful reduction in PCE mass, the ISCO injection was expanded to 7 wells in January 2017. The operating results to date are illustrated in Table 1, comparing the PCE concentration in March 2016 to the current data obtained in the March 9, 2017 sampling. The results are provided in graphical form on Figure 1.

BACKGROUND

The former Rayloc Facility Parts Disassembly Area (PDA) is presently undergoing remediation of PCE contaminated soil under the concrete floor. The treatment zone is approximately 1400 square feet in surface area; the baseline condition was approximately 520 pounds (236 kg) of perchloroethene (PCE) in 1 million kg of soil. A soil vapor extraction (SVE) system was installed in April 2015 as the primary remedial technology. The SVE process involves inducing flow in the subsurface with an applied vacuum, thus enhancing in situ volatilization of contaminants. The original system included 11 vacuum extraction wells and 8 gas injection wells. The extraction vapor is processed through an air-water separator, an air cooled heat exchanger, followed by fixed bed activated carbon vessel.

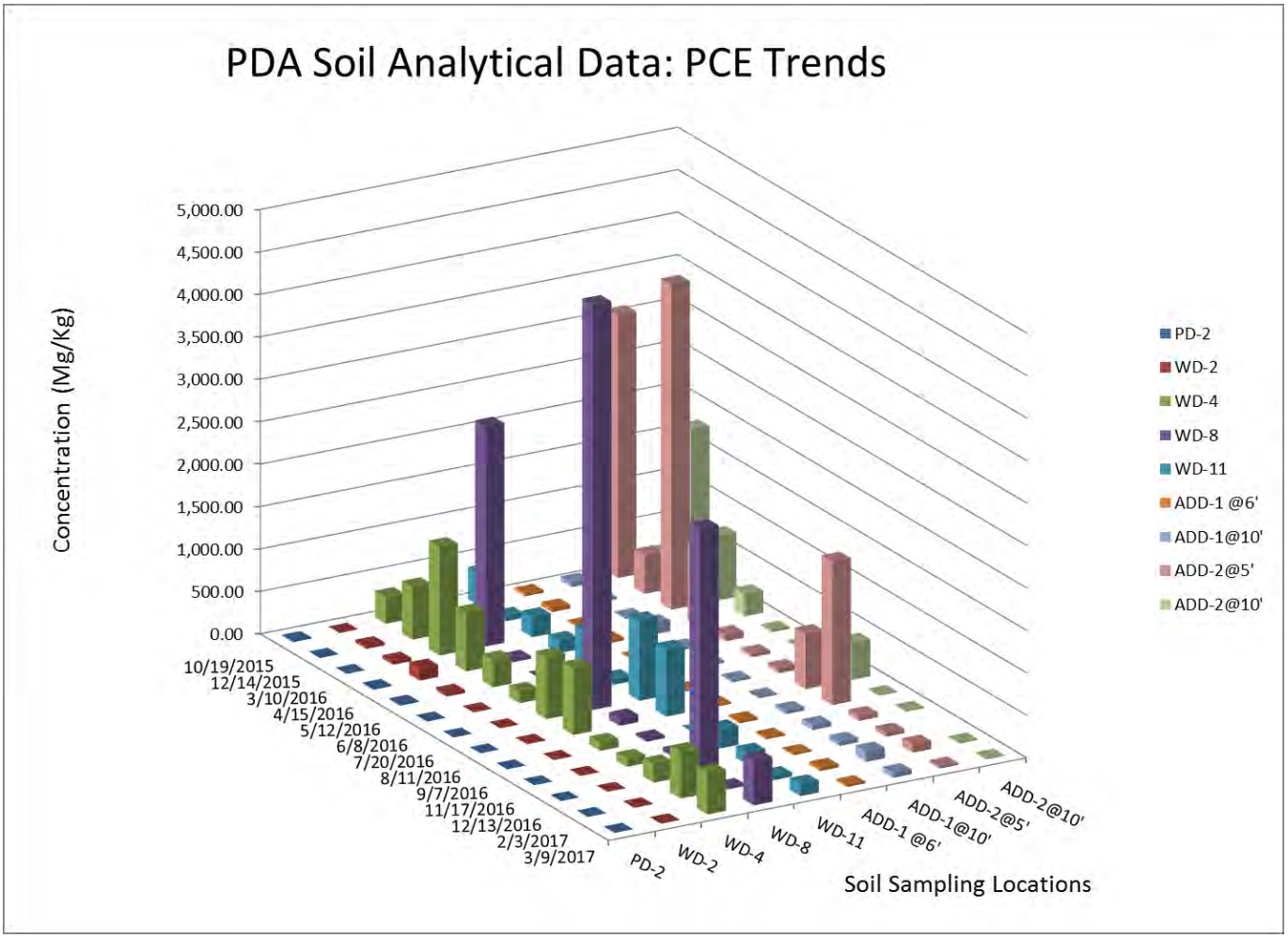
Analysis of operating results to date in September 2015 led to the conclusion that there may be substantial PCE mass in the area west of the existing system. As a result of exploratory soil sampling performed in October 2015 at locations ADD-1 and ADD-2 shown on Exhibit 1, it was determined that 3 additional extraction wells (IW-12, 13, 14) and 1 injection well (I-9) would be installed on the west side of the existing treatment zone. In November 2015, the supplemental wells were installed to a depth of 15 feet with a 1-inch PVC riser and screened between 5 feet and 15 feet, while the upper 5 feet was grouted.

In March 2016, a pilot study was initiated using in situ chemical oxidation (ISCO) to evaluate the effectiveness in accelerating the degradation of PCE in the areas of higher concentration in the western area of the treatment zone. The injection, extraction, and pilot study well locations are shown in Exhibit 1. The positive results of the pilot led to implementation of an expanded program of ISCO injection. The results to date indicate a reduction of 90% of the PCE mass since March 2016. During this period, several modifications and adjustments have been made to the ISCO program to focus on the areas of highest concentrations.

Table 1. PCE Mass Reduction Performance

	Baseline	3/10/2016	Confirmation	3/9/2017	
	PCE Conc.	PCE	PCE Conc.	PCE	% PCE
Location	mg/kg	Mass kg	mg/kg	Mass kg	Reduction
WD-2	38.3	2.18	5.3	0.30	86.16
WD-4	1280	29.14	33.2	0.76	97.41
WD-8	2590	73.70	526	14.97	79.69
WD-11	238	5.29	141	3.13	40.76
PD-2	1.11	0.01	2.59	0.03	-133.33
ADD1-6	22.5	0.77	22.2	0.76	1.33
ADD1-10	13.7	0.78	56.9	3.24	-315.33
ADD2-5	3830	108.98	26.2	0.75	99.32
ADD2-10	764	43.48	8.89	0.51	98.84
		264.32		24.44	90.75

Figure 1.


PDA Soil Analytical Data: PCE Trends
Concentration (Mg/Kg)
5,000.00
4,500.00
4,000.00
3,500.00
3,000.00
2,500.00
2,000.00
1,500.00
1,000.00
500.00
0.00
10/19/2015
12/14/2015
3/10/2016
4/15/2016
5/12/2016
6/8/2016
7/20/2016
8/11/2016
9/7/2016
11/17/2016
12/13/2016
2/3/2017
3/9/2017
PD-2
WD-2
WD-4
WD-8
WD-11
ADD-1 @6'
ADD-1@10'
ADD-2@5'
ADD-2@10'
Soil Sampling Locations

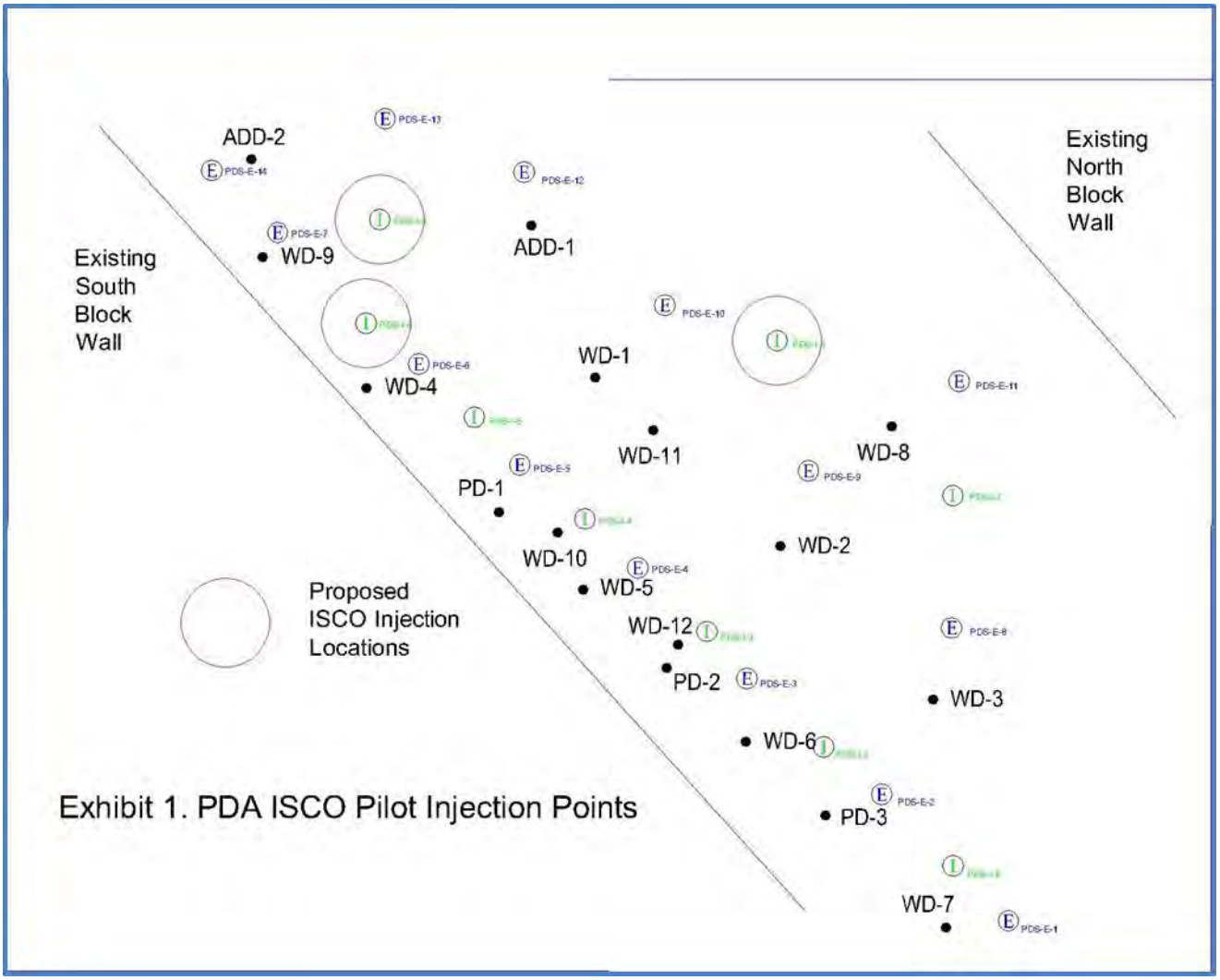


Exhibit 1. PDA ISCO Pilot Injection Points

ANALYSIS

Referring to Exhibit 1, sampling station WD-4 and WD-8 are the areas with elevated levels of PCE. During the last month of ISCO operations, it has been observed that the injection wells have steadily decreased flow rate. The time to drain each batch has increased, and some wells have had to be flushed with water to clear. The area near WD-4 has been particularly slow to cycle ISCO batches. Therefore, we have converted extraction wells 10 and 6 to ISCO injection points to increase the mass of reagent reaching this area.

The injection wells were constructed with the screened interval beginning at 5 feet below top of casing. This was done to minimize short circuiting through cracks in the concrete floor. Now that the lower depths have been reduced, a series of small diameter direct push points will be used to treat the upper five feet. It is believed that this will be effective in the vicinity of area WD-4 and WD-8.

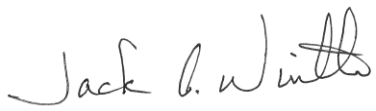
The SVE system has continued to operate effectively during the ISCO operations. Since the PCE mass has been significantly reduced, the amount of VOC reaching the carbon filter has also been commensurately reduced. Table 2 Below illustrates the six months of carbon filter exhaust monthly monitoring since the last carbon replenishment.

Table 2. Carbon Filter Exhaust

Date	VOC (ppm)
10/10/2016	0
11/3/2016	0
12/6/2016	0.3
1/5/2017	1.1
2/2/2017	3.2
3/10/2017	5.5

CD CERTIFICATION

I certify that this electronic copy is complete, identical to the paper copy, and virus free.



Jack A. Wintle, P.G.
Senior Environmental Geologist
Clearwater Environmental Resources, LLC