



DEPARTMENT OF THE ARMY

OFFICE OF ASSISTANT CHIEF OF STAFF FOR INSTALLATION MANAGEMENT
U.S. ARMY FORT MONMOUTH
P.O. 148
OCEANPORT, NEW JERSEY 07757

26 May 2017

Ms. Linda Range
New Jersey Department of Environmental Protection
Bureau of Case Management
401 East State Street
PO Box 420/Mail Code 401-05F
Trenton, NJ 08625-0028

**SUBJECT: Request for No Further Action Determination at Parcel 51
Underground Storage Tanks (USTs) 545 and 653
Site Investigation Report Addendum
Fort Monmouth, New Jersey
PI G000000032**

Attachments:

- A. Figure 1 Layout of Parcel 51 and Figure 2 – Parcel 51 Sample Locations
- B. Table: Validated Laboratory Data Results for Groundwater, Parcel 51
- C. Field Notes
- D. Boring Logs
- E. Analytical Data
- F. Analyst Description of TICs Exceedances.

References (not attached):

1. Army letter to NJDEP dated 8 December 2015, Subject: *No Further Action Request Site Investigation Report Addendum for the Environmental Condition of Property (ECP) Parcel 51 Underground Storage Tanks (Excluding the Building 750 Motor Pool Area) Fort Monmouth, NJ.*
2. NJDEP letter to Army dated 6 December 2016, Subject: *No Further Action Request Site Investigation Addendum for the Environmental Condition of Property (ECP) Parcel 51 Underground Storage Tanks (Excluding the Building 750 Motor Pool Area) Fort Monmouth, NJ.*
3. Army letter to NJDEP dated 29 December 2016, Subject: *Underground Storage Tanks (USTs) 545 and 653 Letter Work Plan Addendum, Fort Monmouth, New Jersey.*
4. NJDEP letter to the Army dated 12 January 2017, Subject: *Underground Storage Tanks (USTs) 545 and 653 Letter Work Plan Addendum, Fort Monmouth, Oceanport, Monmouth County.*

Dear Ms. Range:

The U.S. Army Fort Monmouth (FTMM) Team has prepared this addendum to present the results of additional field sampling at former Underground Storage Tanks (USTs) 545 and 653. These USTs were unregulated heating oil tanks (UHOTs) and were located within Environmental Condition of Property (ECP) Parcel 51.

The additional field sampling consisted of: 1) the installation of one temporary groundwater monitoring well installed with a Geoprobe® rig immediately downgradient of the limits of excavation at each of the two UST locations; 2) collection of groundwater samples from each of the two temporary monitoring wells (PAR-51-545-TMW-01 and PAR-51-653-TMW-01) on 10 and 11 January 2017; and 3) analyses of samples for volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs) plus tentatively identified compounds (TICs), in accordance with the requirements for No. 2 fuel oil in Table 2-1 of the New Jersey Administrative Code (NJAC) 7:26E Technical Requirements for Site Remediation.

The locations of the two temporary monitoring wells are shown on Attachment A. The analytical results and exceedances of applicable NJDEP Ground Water Quality Criteria (GWQC) are provided in Attachment B. Field notes are provided in Attachment C, and boring logs are provided in Attachment D. The samples were analyzed by ALS Environmental; analytical data packages are provided in Attachment E.

The groundwater sampling and analyses for each of the two former UST sites are discussed below.

UST 545

UST 545 was a residential fuel oil tank that was removed in 1994 as described in Reference 1. The maximum total petroleum hydrocarbons (TPH) concentration from post-excavation soil samples was 258 milligrams per kilogram (mg/kg). NJDEP (Reference 2) required a groundwater investigation because contaminated soils extended to the water table.

Temporary well PAR-51-545-TMW-01 was installed at the former UST 545 location, sampled, and subsequently abandoned (Attachment A). Both a primary sample and a field duplicate were collected from this temporary well. Groundwater was encountered at approximately 5 feet below ground surface (bgs); please see Attachment D. As shown on Attachment B, the SVOCs benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, bis(2-ethylhexyl)phthalate, and indeno(1,2,3-cd)pyrene exceeded the GWQC in the primary sample, but not in the field duplicate. These detections were estimated ("J" flagged) due to the low concentrations encountered. Except for bis(2-ethylhexyl)phthalate, these analytes are polycyclic aromatic hydrocarbons (PAHs) that have been encountered at other FTMM locations within surficial soils and fill. These low-level groundwater exceedances of PAHs are considered to have resulted from entrainment of soil from other anthropogenic, non-UST related sources (such as surficial soils or fill) resulting from sample turbidity which is common with temporary well groundwater samples. Turbid samples from other temporary wells at FTMM (such as within Parcel 79 and the 800 Area) have often encountered detected PAHs in groundwater that have not been attributed to fuel oil. There were also no field indications of fuel oil contamination such as soil staining or elevated photoionization detector (PID) readings at the former UST 545 site. Therefore, the PAH exceedances at UST 545 do not

indicate a fuel oil release. Bis(2-ethylhexyl)phthalate is a common field and/or laboratory contaminant and therefore is also not indicative of a fuel oil release.

SVOC TICs exceeded the NJDEP GWQC in the field duplicate and equipment blank (PAR-51-EB-01112017). These exceedances are not considered to be site related because both the equipment blank, the matrix spike/matrix spike duplicate (MS/MSD), and the field duplicate had similar instrument response. The analyst indicated that the instrument response (described as "broad, late-eluting peaks") resulting in the GWQC exceedances were likely due to high molecular weight compounds that were retained before the end of the instrument run time, and so ended up emerging late in the next chromatographic run as carryover (Attachment F). Therefore, there were no exceedances of the GWQC at UST 545 indicative of fuel oil.

UST 653

UST 653 was a residential fuel oil tank associated with Building 653, which was demolished in 1978. Excavations in 1994 and 1995 indicated that a UST was previously removed as described in Reference 1. Temporary well PAR-51-653-TMW-01 was installed downgradient of the former UST 653 location (the location was adjusted to avoid underground utilities), sampled, and subsequently abandoned (Attachment A). As indicated in Attachment D, groundwater was encountered at approximately 6 feet below ground surface (bgs). As shown on Table 2 of Attachment B, there were no exceedances of the GWQC. Therefore, there were no indications of a release of fuel oil to groundwater at UST 653.

Based on the information provided in the subject addendum, the FTMM Team requests No Further Action determinations for USTs 545 and 653. Our technical Point of Contact (POC) is Kent Friesen; (732) 383-7201 or kent.friesen@parsons.com. Should you have any questions or require additional information, please contact me by phone at (732) 380-7064 or by email at william.r.colvin18.civ@mail.mil.

Sincerely,


William R. Colvin, PMP, PG, CHMM
BRAC Environmental Coordinator

cc: Linda Range, NJDEP (2 hard copies)
William Colvin, FTMM-BEC (e-mail)
Delight Balducci, HQDA ACSIM (e-mail)
Joseph Pearson, Calibre (e-mail)
James Moore, USACE (e-mail)
Jim Kelly, USACE (e-mail)
Cris Grill, Parsons (e-mail)



New Jersey Department of Environmental Protection
Site Remediation Program

Report Certifications for RCRA GPRA 2020, CERCLA, and Federal Facility Sites

These certifications are to be used for reports submitted for RCRA GPRA 2020, CERCLA, and Federal Facility Sites. The Department has developed guidance for report certifications for RCRA GPRA 2020, CERCLA, and Federal Facility Sites under traditional oversight. The "Person Responsible for Conducting the Remediation Information and Certification" is required to be submitted with each report. For those sites that are required or opt to use a Licensed Site Remediation Professional (LSRP) the report must also be certified by the LSRP using the "Licensed Site Remediation Professional Information and Statement". For additional guidance regarding the requirement for LSRPs at RCRA GPRA 2020, CERCLA and Federal Facility Sites see http://www.nj.gov/dep/srp/srra/training/matrix/quick_ref/rcra_cercla_fed_facility_sites.pdf.

Document: "Request for No Further Action Determination at Parcel 51, Underground Storage Tanks (USTs) 545 and 653, Site Investigation Report Addendum, Fort Monmouth, New Jersey"

PERSON RESPONSIBLE FOR CONDUCTING THE REMEDIATION INFORMATION AND CERTIFICATION

Full Legal Name of the Person Responsible for Conducting the Remediation: William R. Colvin

Representative First Name: William Representative Last Name: Colvin

Title: BRAC Environmental Coordinator

Phone Number: (732) 380-7064

Ext:

Fax:

Mailing Address: P.O. Box 148

City/Town: Oceanport

State: NJ

Zip Code: 07757

Email Address: william.r.colvin18.civ@mail.mil

This certification shall be signed by the person responsible for conducting the remediation who is submitting this notification in accordance with Administrative Requirements for the Remediation of Contaminated Sites rule at N.J.A.C. 7:26C-1.5(a).

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein, including all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, to the best of my knowledge, I believe that the submitted information is true, accurate and complete. I am aware that there are significant civil penalties for knowingly submitting false, inaccurate or incomplete information and that I am committing a crime of the fourth degree if I make a written false statement which I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of any statute, I am personally liable for the penalties.

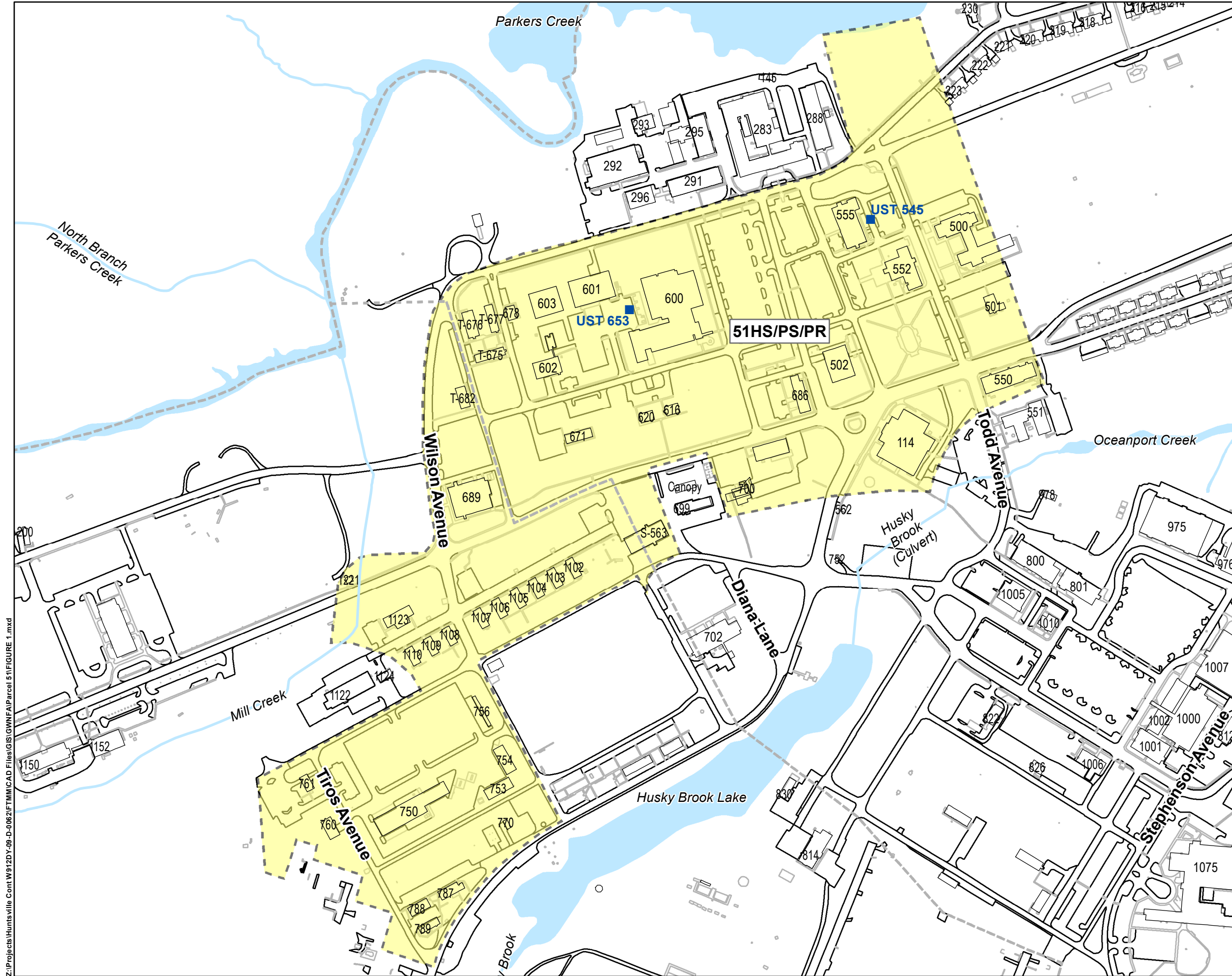
Signature:

Date: 05/26/2017

Name/Title: William R. Colvin / BRAC Environmental
Coordinator

Attachment A

Figure 1 Layout of Parcel 51 and Figure 2 Parcel 51 Sample Locations



LEGEND:

- Parcel 51 Boundary
- Municipal Boundary
- Surface Water Feature
- UST Location

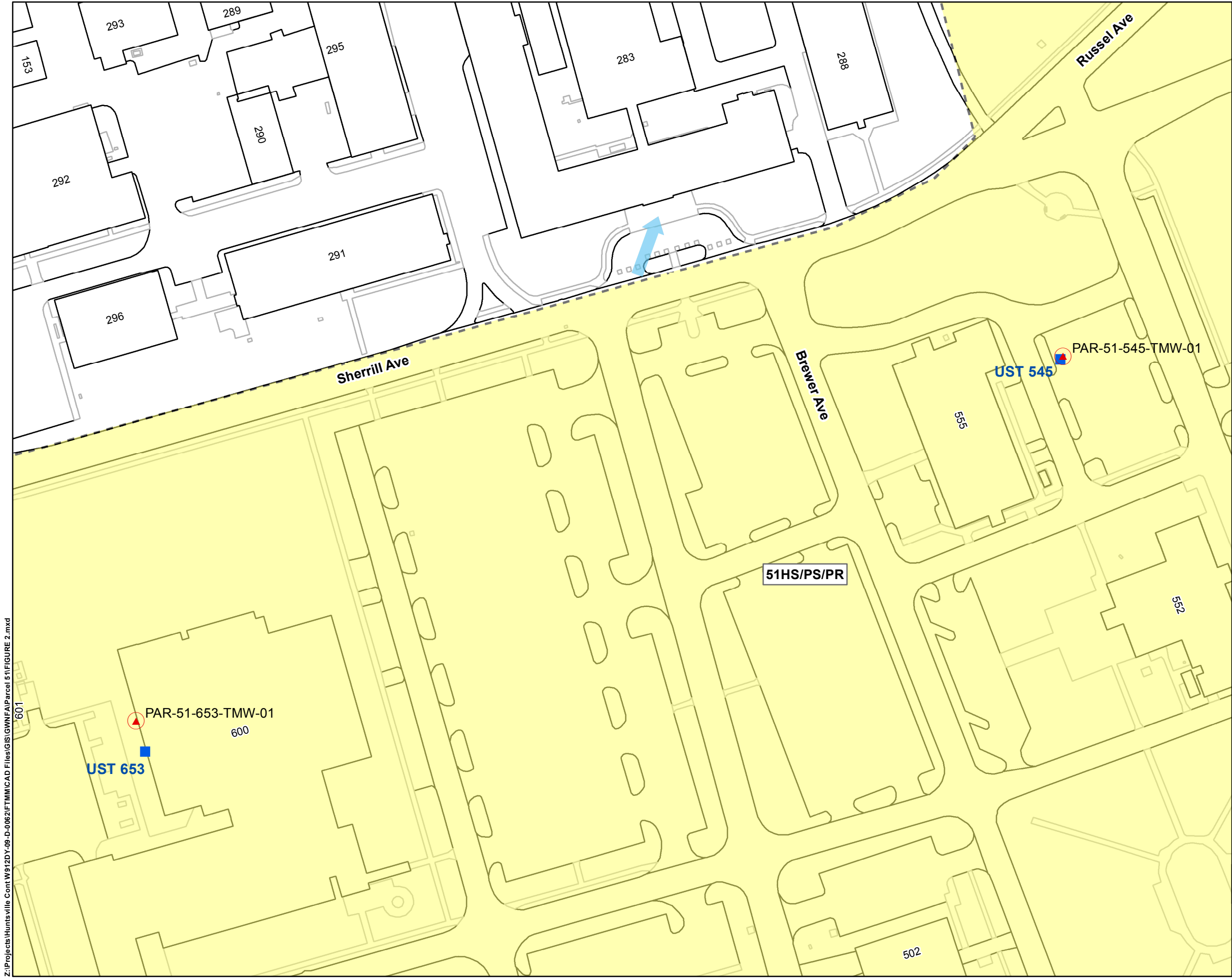
Source: FTMM Supplied CAD, 2013; U.S. Army BRAC, 2008; 2008 SI Report; USGS NHD, 2012.

PARSONS
401 Diamond Drive NW,
Huntsville AL

Fort Monmouth
New Jersey

LAYOUT OF PARCEL 51

CREATED BY: AM	REVIEWED BY: KF
DATE: MAY. 2017	FIGURE NUMBER: FIGURE 1
PROJECT NUMBER: 748810-06016	FILE: FIGURE 1.mxd



LEGEND:

- Former UST Location
- ▲ Groundwater Sample
- ▨ Parcel 51 Boundary
- Generalized Groundwater Flow Direction

NOTE:

Groundwater samples were collected from temporary wells.

N

1 inch = 91 feet

0 20 40 80 Feet

Source: FTMM Supplied CAD; Shaw Environmental 2008.

PARSONS
401 Diamond Drive NW,
Huntsville AL

Fort Monmouth
New Jersey

Parcel 51
Sample Locations

CREATED BY: AM	REVIEWED BY: KF
DATE: MAY. 2017	FIGURE NUMBER: FIGURE 2
PROJECT NUMBER: 748810-06019	FILE: FIGURE 2.mxd

Attachment B
Validated Laboratory Data Results for Groundwater, Parcel 51

Validated Laboratory Results for Groundwater, Parcel 51

Loc ID	NJ Ground Water Quality Criteria	PAR-51-545-TMW01		PAR-51-653-TMW01	PAR-51-EB-01112017
Sample ID		PAR-51-545-TMW-01-14.0	PAR-51-545-TMW-101-14.0	PAR-51-653-TMW-01-15.0	Equipment Blank
Sample Date		1/11/2017	1/11/2017	1/10/2017	1/11/2017
Filtered		Total	Total	Total	Total
Volatile Organic Compounds (µg/l)					
1,1,1,2-Tetrachloroethane	1	< 0.75	< 0.75	< 0.75	< 0.75
1,1,1-Trichloroethane	30	< 0.75	< 0.75	< 0.75	< 0.75
1,1,2,2-Tetrachloroethane	1	< 0.75	< 0.75	< 0.75	< 0.75
1,1,2-Trichloroethane	3	< 0.75	< 0.75	< 0.75	< 0.75
1,1-Dichloroethane	50	< 0.75	< 0.75	< 0.75	< 0.75
1,1-Dichloroethene	1	< 0.75	< 0.75	< 0.75	< 0.75
1,1-Dichloropropene	100	< 0.75	< 0.75	< 0.75	< 0.75
1,2,3-Trichlorobenzene	100	< 0.75	< 0.75	< 0.75	< 0.75
1,2,3-Trichloropropane	0.03	< 2.5	< 2.5	< 2.5	< 2.5
1,2,4-Trichlorobenzene	9	< 0.75	< 0.75	< 0.75	< 0.75
1,2,4-Trimethylbenzene	100	< 0.75	< 0.75	< 0.75	< 0.75
1,2-Dibromo-3-chloropropane	0.02	< 2.5	< 2.5	< 2.5	< 2.5
1,2-Dibromomethane	0.03	< 0.75	< 0.75	< 0.75	< 0.75
1,2-Dichlorobenzene	600	< 0.75	< 0.75	< 0.75	< 0.75
1,2-Dichloroethane	2	< 0.75	< 0.75	< 0.75	< 0.75
1,2-Dichloropropane	1	< 0.75	< 0.75	< 0.75	< 0.75
1,3,5-Trimethylbenzene	100	< 0.75	< 0.75	< 0.75	< 0.75
1,3-Dichlorobenzene	600	< 0.75	< 0.75	< 0.75	< 0.75
1,3-Dichloropropane	100	< 0.75	< 0.75	< 0.75	< 0.75
1,4-Dichlorobenzene	75	< 0.75	< 0.75	< 0.75	< 0.75
2,2-Dichloropropane	100	< 0.75	< 0.75	< 0.75	< 0.75
2-Chlorotoluene	100	< 0.75	< 0.75	< 0.75	< 0.75
Acetone	6,000	5.7	7.3	4.3 J	<3.8
Benzene	1	< 0.75	< 0.75	< 0.75	< 0.75
Bromobenzene	100	< 0.75	< 0.75	< 0.75	< 0.75
Bromochloromethane	100	< 0.75	< 0.75	< 0.75	< 0.75
Bromodichloromethane	1	< 0.75	< 0.75	< 0.75	< 0.75
Bromoform	4	< 0.75	< 0.75	< 0.75	< 0.75
Carbon tetrachloride	1	< 0.75	< 0.75	< 0.75	< 0.75
Chlorobenzene	50	< 0.75	< 0.75	< 0.75	< 0.75
Chlorodibromomethane	1	< 0.75	< 0.75	< 0.75	< 0.75
Chloroethane	5	< 0.75	< 0.75	< 0.75	< 0.75
Chloroform	70	< 0.75	< 0.75	< 0.75	< 0.75
Cis-1,2-Dichloroethene	70	< 0.75	< 0.75	< 0.75	< 0.75
Cis-1,3-Dichloropropene	1	< 0.75	< 0.75	< 0.75	< 0.75
Cymene	100	< 0.75	< 0.75	< 0.75	< 0.75
Dichlorodifluoromethane	1,000	< 0.75	< 0.75	< 0.75	< 0.75
Ethyl benzene	700	< 0.75	< 0.75	< 0.75	< 0.75
Hexachlorobutadiene	1	< 0.75	< 0.75	< 0.75	< 0.75
Isopropylbenzene	700	< 0.75	< 0.75	< 0.75	< 0.75
Meta/Para Xylene	1,000	< 1.5	< 1.5	< 1.5	< 1.5
Methyl bromide	10	< 0.75	< 0.75	< 0.75	< 0.75
Methyl butyl ketone	300	< 3.8	< 3.8	< 3.8	< 3.8
Methyl chloride	100	< 0.75	< 0.75	< 0.75	< 0.75
Methyl ethyl ketone	300	< 3.8	< 3.8	< 3.8	< 3.8
Methyl isobutyl ketone	100	< 3.8	< 3.8	< 3.8	< 3.8
Methyl Tertbutyl Ether	70	< 0.75	< 0.75	< 0.75	< 0.75
Methylene chloride	3	< 0.75	< 0.75	< 0.75	< 0.75
Naphthalene	300	< 0.75	< 0.75	< 0.75	< 0.75
n-Butylbenzene	100	< 0.75	< 0.75	< 0.75	< 0.75
Ortho Xylene	1,000	< 0.75	< 0.75	< 0.75	< 0.75
p-Chlorotoluene	100	< 0.75	< 0.75	< 0.75	< 0.75
Propylbenzene	100	< 0.75	< 0.75	< 0.75	< 0.75
sec-Butylbenzene	100	< 0.75	< 0.75	< 0.75	< 0.75
Styrene	100	< 0.75	< 0.75	< 0.75	< 0.75
Tert Butyl Alcohol	100	< 12.5	< 12.5	< 12.5	< 12.5
tert-Butylbenzene	100	< 0.75	< 0.75	< 0.75	< 0.75
Tetrachloroethene	1	< 0.75	< 0.75	< 0.75	< 0.75
Toluene	600	< 0.75	< 0.75	< 0.75	< 0.75
Total Xylenes	1,000	< 2.3	< 2.3	< 2.3	< 2.3
Trans-1,2-Dichloroethene	100	< 0.75	< 0.75	< 0.75	< 0.75
Trans-1,3-Dichloropropene	1	< 0.75	< 0.75	< 0.75	< 0.75
Trichloroethene	1	< 0.75	< 0.75	< 0.75	< 0.75
Trichlorofluoromethane	2,000	< 0.75	< 0.75	< 0.75	< 0.75
Vinyl chloride	1	< 0.75	< 0.75	< 0.75	< 0.75
Semivolatile Organic Compounds (µg/l)					
1,2,4-Trichlorobenzene	9	< 3.3	< 3.3	< 0.98 UJ	< 0.93
1,2-Dichlorobenzene	600	< 3.3	< 3.3	< 0.98 UJ	< 0.93
1,2-Diphenylhydrazine	20	< 3.3	< 3.3	< 0.98 UJ	< 0.93
1,3-Dichlorobenzene	600	< 3.3	< 3.3	< 0.98 UJ	< 0.93
1,4-Dichlorobenzene	75	< 3.3	< 3.3	< 0.98 UJ	< 0.93
2,4,5-Trichlorophenol	700	< 10	< 10	< 2.9	< 2.8
2,4,6-Trichlorophenol	20	< 3.3	< 3.3	< 0.98	< 0.93
2,4-Dichlorophenol	20	< 3.3	< 3.3	< 0.98	< 0.93
2,4-Dimethylphenol	100	< 16.7	< 16.7	< 4.9	< 4.7
2,4-Dinitrophenol	40	< 26.7	< 26.7	< 7.8	< 7.5
2,4-Dinitrotoluene	10	< 3.3	< 3.3	< 0.98 UJ	< 0.93
2,6-Dinitrotoluene	10	< 3.3	< 3.3	< 0.98 UJ	0.79 J
2-Chloronaphthalene	600	< 3.3	< 3.3	< 0.98 UJ	< 0.93
2-Chlorophenol	40	< 6.7	< 6.7	< 2	< 1.9
2-Methylnaphthalene	30	< 3.3	< 3.3	< 0.98 UJ	< 0.93
2-Methylphenol	100	< 3.3	< 3.3	< 0.98	< 0.98
2-Nitroaniline	100	< 3.3	< 3.3	< 0.98 UJ	< 0.93
2-Nitrophenol	100	< 6.7	< 6.7	< 2	< 1.9
3,3'-Dichlorobenzidine	30	< 10 UJ	< 10	< 2.9 UJ	< 2.8
3-Nitroaniline	100	< 6.7	< 6.7	< 2 UJ	< 1.9
4,6-Dinitro-2-methylphenol	1	< 16.7	< 16.7	< 4.9	< 4.7
4-Bromophenyl phenyl ether	100	< 3.3	< 3.3	< 0.98 UJ	< 0.93
4-Chloro-3-methylphenol	100	< 3.3	< 3.3	< 0.98	< 0.93

Loc ID	NJ Ground Water Quality Criteria	PAR-51-545-TMW01		PAR-51-653-TMW01	PAR-51-EB-01112017
Sample ID		PAR-51-545-TMW-01-14.0	PAR-51-545-TMW-101-14.0	PAR-51-653-TMW-01-15.0	Equipment Blank
Sample Date		1/11/2017	1/11/2017	1/10/2017	1/11/2017
Filtered		Total	Total	Total	Total
4-Chloroaniline	30	< 3.3	< 3.3	< 0.98 UJ	< 0.93
4-Chlorophenyl phenyl ether	100	< 3.3	< 3.3	< 0.98 UJ	< 0.93
4-Nitroaniline	5	< 3.3	< 3.3	< 0.98 UJ	< 0.93
4-Nitrophenol	100	< 16.7	< 16.7	< 4.9	< 4.7
Acenaphthene	400	< 3.3	< 3.3	< 0.98 UJ	< 0.93
Acenaphthylene	100	0.64 J	< 3.3	< 0.98 UJ	< 0.93
Anthracene	2,000	< 3.3	< 3.3	< 0.98 UJ	< 0.93
Benzidine	20	< 100 UJ	< 100	< 29.3 UJ	< 28
Benzo(a)anthracene	0.1	0.91 J	< 3.3	< 0.98 UJ	< 0.93
Benzo(a)pyrene	0.1	0.83 J	< 3.3	< 0.98 UJ	< 0.93
Benzo(b)fluoranthene	0.2	0.98 J	< 3.3	< 0.98 UJ	< 0.93
Benzo(ghi)perylene	100	< 3.3	< 3.3	< 0.98 UJ	< 0.93
Benzo(k)fluoranthene	0.5	< 3.3	< 3.3	< 0.98 UJ	< 0.93
Benzyl alcohol	2,000	< 6.7	< 6.7	< 2 UJ	< 1.9
Bis(2-Chloroethoxy)methane	100	< 3.3	< 3.3	< 0.98 UJ	< 0.93
Bis(2-Chloroethyl)ether	7	< 3.3	< 3.3	< 0.98 UJ	< 0.93
Bis(2-Chloroisopropyl)ether	300	< 3.3	< 3.3	< 0.98 UJ	< 0.93
Bis(2-Ethylhexyl)phthalate	3	3.2 J	2.9 J	0.33 J	< 0.93
Butyl benzyl phthalate	100	0.82 J	0.62 J	< 0.98 UJ	0.15 J
Carbazole	100	< 3.3	< 3.3	< 0.98 UJ	< 0.93
Chrysene	5	0.6 J	< 3.3	< 0.98 UJ	< 0.93
Cresol	NLE	< 3.3	< 3.3	< 0.98	< 0.93
Dibenz(a,h)anthracene	0.3	< 3.3	< 3.3	< 0.98 UJ	< 0.93
Dibenzofuran	100	< 3.3	< 3.3	< 0.98 UJ	< 0.93
Diethyl phthalate	6,000	0.8 J	< 3.3	< 0.98 UJ	< 0.93
Dimethyl phthalate	100	0.71 J	< 3.3	< 0.98 UJ	< 0.93
Di-n-butylphthalate	700	1.7 J	0.98 J	0.14 J	< 0.93
Di-n-octylphthalate	100	< 3.3	< 3.3	< 0.98 UJ	< 0.93
Fluoranthene	300	1.1 J	< 3.3	< 0.98 UJ	< 0.93
Fluorene	300	< 3.3	< 3.3	< 0.98 UJ	< 0.93
Hexachlorobenzene	0.02	< 3.3	< 3.3	< 0.98 UJ	< 0.93
Hexachlorobutadiene	1	< 3.3	< 3.3	< 0.98 UJ	< 0.93
Hexachlorocyclopentadiene	40	< 6.7 UJ	< 6.7	< 2 UJ	< 1.9
Hexachloroethane	7	< 3.3	< 3.3	< 0.98 UJ	< 0.93
Indeno(1,2,3-cd)pyrene	0.2	0.65 J	< 3.3	< 0.98 UJ	< 0.93
Isophorone	40	< 3.3	< 3.3	< 0.98 UJ	< 0.93
Naphthalene	300	< 3.3	< 3.3	< 0.98 UJ	< 0.93
Nitrobenzene	6	< 6.7	< 6.7	< 2 UJ	< 1.9
N-Nitrosodimethylamine	0.8	< 6.7	< 6.7	< 2 UJ	< 1.9
N-Nitroso-di-n-propylamine	10	< 3.3	< 3.3	< 0.98 UJ	< 0.93
N-Nitrosodiphenylamine	10	< 6.7	< 6.7	< 2 UJ	< 1.9
Pentachlorophenol	0.3	< 26.7	< 26.7	< 7.8	< 7.5
Phenanthrene	100	0.89 J	< 3.3	< 0.98 UJ	< 0.93
Phenol	2,000	< 3.3	< 3.3	< 0.98 UJ	< 0.93
Pyrene	200	1.2 J	< 3.3	< 0.98 UJ	< 0.93
TIC SVOCs (µg/l)					
Total TICs, Semi-Volatile	500	338.9 JN	1051.3 JN	50.6 JN	581.1 JN

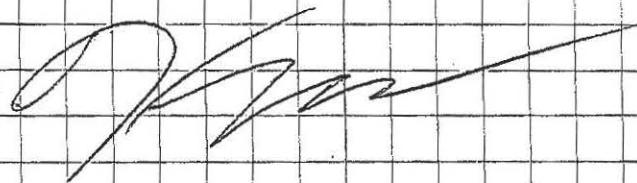
Attachment C
Field Notes

Location Oceanport, NJ Date 1-10-17
 Project / Client FTMM / USACE

9:34 - Sample 3.0-3.5 ~~AA~~
 9:55 - Start Drilling SB-45
 10:00 - Sample 0.5-1.0 ~~AA~~
 10:02 - 2.25-2.75 ~~AA~~
 10:04 - 3.0-3.5 ~~AA~~
 9:54 - Start Drilling SB-46
 10:06 - 0.5-1.0 ~~AA~~
 10:08 - Sample 2.25-2.75 ~~AA~~
 10:10 - 3.0-3.5 ~~AA~~
 10:04 - Warm up Break Start Drilling SB-25
 10:22 - Sample 0.5-1.0 ~~AA~~
 10:24 - 2.25-2.75 (Dep / MS / MSD) ~~AA~~
 10:26 - 3.0-3.5 ~~AA~~
 10:10 - Warm up Break
 11:37 - Start Drilling SB-07
 11:45 - Sample 7.5-8.0 ~~AA~~
 11:50 - 11.0-11.5 ~~AA~~
 11:55 - 14.5-15.0 ~~AA~~
~~12:00 - Start Drilling Lunch~~
 11:06 - Start Drilling SB-47
 11:14 - Sample 0.5-1.0 ~~AA~~
 11:16 - 2.25-2.75 ~~AA~~
 11:18 - 3.5-4.0 ~~AA~~
 11:13 - Start Drilling SB-48

Location Oceanport, NJ Date 1-10-17
 Project / Client FTMM / USACE

11:22 - Sample 0-0.5 ~~AA~~
 11:24 - 2.25-2.75 ~~AA~~
 11:26 - 3.5-4.0 ~~AA~~
 12:00 - Cascade lunch (Calibrate P10: 100.0)
 13:25 - Start Drilling @ Par-51-653-TMU-01
 14:07 - Sample Installed TMW 4' below H₂O
 tabula with 10' screen (Bottom 20' bgs)
 14:07 - Sample PAR-51-653-TMU-01-15.0 (Baker)
 14:00 - A.110 Start Drilling Par-51-5
 ② 14:20 - Installed TMW 4' below H₂O tabe
 with 10' screen (Bottom 20' bgs)
 15:00 - Cascade RAD, Slow Recharge Rate
 at PAR-51-545-TMU-01, Sample in morning
 Return to office for paperwork
 16:00 KAL + SAA ~~ADD STX~~



Location Oceanport, NJDate 1-11-17Project / Client FTMM / USACE

Weather - Low 30's / Rain

Activity - GW Sampling, Well install, Well completion

Equipment - 1x PID, 1x Geoprobe, 1x IP, PPE, Hand Tools

Personnel - KM + SP - Parsons

Nick + Eric - Cascade

Activity

07:00 - KM onsite, Calibrate PID (99.9)

07:30 - All onsite, HSE Meeting

08:15 - Sample PAR-S1-S45-TMU-01-14.0 (Dup/18/150/PS)

08:35 - Mob Geoprobe + Well/Auger Equipment to

Parcel 34. Site Walk, Drillers Head back to FTMM to plumb

09:30 - SP Finished with GW sampling at PAR-S1-S45-TMU-01

MOB to Parcel 34

10:08 - Start Drilling (Auger) 2567-MW-09 (▽ S')

10:20 - Finish Drilling FOB 14' bgs. Install MW

" Diameter, 10" Screen (2' above H₂O Table / 8' below H₂O table) See Well Construction Detail 2567-MW-09

10:56 - Start Drilling 2567-MW-10 (▽ S')

Observed Peat gravel from 1-13'. Called Cory + Frank (Parsons) to see if we were where we expected to be. Cory + Frank agreed that we were in the excavation and needed to be on the edge. Frank

11:50 - Frank out at site to remark MW-10

Location Oceanport, NJDate 1-11-17Project / Client FTMM-USACE

11:50 - 2567-MW-10 moved 8' to the East of original location. Original location renamed

2567-³⁰~~AW~~10. Frank Accorsi will GPS locate and send out new map. Cory Mahony was notified

11:45 - Start Drilling 2567-MW-08 (▽ S')

12:00 - Finish Drilling 2567-MW-08 (14' bgs)

Install 2" MW to 13' bgs (See Well construction Detail 2567-MW-08)

12:30 - Cascade take lunch (PID calibrated: 99.8)

11:00 - Samaira P. (Parsons) placed all samples collected this morning on Col's. Will be sent out with

13:00 - Start Drilling 2567-MW-10. ▽ S'

13:25 - Finish Drilling 2567-MW-10 (14' bgs)

Install 2" MW to 13' bgs (2' Above / 8' below H₂O Table) See Well Construction Detail 2567-MW-10

13:44 - Well completion on 2567-MW-08

14:20 - Finished Well completion on 2567-MW-08

14:21 - Start Well completion on 2567-MW-10

14:46 - Finish Well completion on 2567-MW-10

14:41 - Start Well completion on 2567-MW-09

15:05 - Finish Well completion on 2567-MW-09

15:15 - Cascade clean site

16:00 - KM, SP in office prep paperwork

16:10 - OFFSITE

Note in the Rain

Attachment D
Boring Logs

Soil Boring Log

CLIENT: USACE					INSPECTOR: <u>Kevin McMahon</u>		BORINGWELL NO: <u>PAR-S1-545-TM01</u>	
PROJECT NAME: <u>FTMM</u>					DRILLER: <u>Nick</u>		LOCATION DESCRIPTION	
PROJECT LOCATION: <u>Parcel 51</u>					WEATHER: <u>Low 30</u>			
PROJECT NUMBER: <u>748810-07100</u>					CONTRACTOR: <u>Cascade</u>		LOCATION PLAN	
GROUNDWATER OBSERVATIONS					RIG TYPE: <u>Geoprob</u>		Oceanport, New Jersey	
WATER LEVEL: <u>~5'</u>					DATE/TIME START: <u>14:00 / 1-10-17</u>			
DATE: <u>1/10/17</u>					DATE/TIME FINISH: <u>14:32 / 1-10-17</u>			
TIME:					WEIGHT OF HAMMER:			
MEAS. FROM:					DROP OF HAMMER:			
					TYPE OF HAMMER:			
DEPTH (feet)	SAMPLE I.D.	BLOWS per 6"	ADV/ REC.	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS	
0			10/42	○	Surface Asphalt			
				○	0'-0.5' Asphalt			
1				○	0.5'-2.5' - Dry, Orange/Brn, F-M			
				○	SAND, Dense,			
2				○	2.5'-3.5' - Moist, Gray/Brn, F-M			
				○	SAND, Dense, Some Silt, Trace			
3				○	clay			
					3.5'-5' - NR			
5		10/36		○	5'-7' - Wet, Gray, F-M SAND,			
				○	Some Silt, Very Soft			
6				○	7'-8' - Wet, Gray/Brn, Clay, Stiff,			
				○	Some Silt, Trace F-M Gray Sand			
7				○				
				○				
8				○	8'-10' - NR			
9								
10								
Remarks:								
Sample Types					Consistency vs. Blowcount / Foot			
S - Split-Spoon					Granular (Sand & Gravel)			
U - Undisturbed Tube					Fine Grained (Silt & Clay)			
C - Rock Core					V. Loose: 0-4 Dense: 30-50 V. Soft: <2			
A - Auger Cuttings					Loose: 4-10 V. Dense: >50 Soft: 2-4 V. S			
					M. Stiff: 4-8 Hard: >30			
					Silt - 20-35%			
					Clay - 10-20%			
					trace - <10%			
					moisture, density, color, gradation			

*Boring Completed
to 20' bgs. TMW
installed on 1-10-17.
will be sampled on
1-11-17 in the AM

Soil Boring Log

CLIENT: USACE PROJECT NAME: <u>ETMA</u> PROJECT LOCATION: <u>Parcel 51</u> PROJECT NUMBER: <u>748510-07100</u> GROUNDWATER OBSERVATIONS WATER LEVEL: DATE: TIME: MEAS. FROM:					INSPECTOR: <u>Kenn McMath</u> DRILLER: <u>Nick</u> WEATHER: <u>Low 30's</u> CONTRACTOR: <u>Cascadia</u> RIG TYPE: <u>Gridprobe</u> DATE/TIME START: <u>14:00 / 1-10-17</u> DATE/TIME FINISH: <u>14:32 / 1-10-17</u> WEIGHT OF HAMMER: DROP OF HAMMER: TYPE OF HAMMER:					BORING/WELL NO: <u>PAR-ST-545-TMW</u> LOCATION DESCRIPTION LOCATION PLAN Oceanport, New Jersey	
DEPTH (feet)	SAMPLE I.D.	BLOWS per 6"	ADV/ REC.	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS				
<u>1.0</u>			<u>60/60</u>	<u>0</u>	<u>10'-11.5' - Wet, ^{Light} Orange/Brown, F-M SAND,</u>						
				<u>0</u>	<u>Soft, Trace Gravel</u>						
<u>1.1</u>				<u>0</u>							
				<u>0</u>	<u>11.5'-13.0' - Wet, Light Brown/Orange/Gray,</u>						
<u>1.2</u>				<u>0</u>	<u>M-F SAND, Dense, Some Silt</u>						
				<u>0</u>							
<u>1.3</u>				<u>0</u>	<u>13.0'-15.0' - Wet, Dark gray, F-M</u>						
				<u>0</u>	<u>SAND, Dense, Trace Silt</u>						
<u>1.4</u>				<u>0</u>							
				<u>0</u>							
<u>1.5</u>				<u>0</u>	<u>15.0'-17.0' - Wet, Dark Gray, F-M</u>						
				<u>0</u>	<u>SAND, Soft, Some Silt</u>						
<u>1.6</u>				<u>0</u>							
				<u>0</u>	<u>17.0'-18.0' - Wet, Dark gray, M-F</u>						
<u>1.7</u>				<u>0</u>	<u>SAND, Dense, Some Silt, Trace</u>						
				<u>0.1</u>							
<u>1.8</u>				<u>0</u>	<u>18.0'-20' - Wet, Dark Gray, F-M SAND,</u>						
				<u>1.1</u>	<u>Dense, Some Silt, Trace clay</u>						
<u>1.9</u>				<u>0</u>	<u>EOB 20' bgs</u>						
				<u>0</u>							
<u>2.0</u>				<u>0</u>	<u>EOB</u>						

Remarks: TMW installed with 10' screen 4' below H₂O Table.

Sample Types	Consistency vs. Blowcount / Foot				
S -- Split-Spoon	Granular (Sand & Gravel)		Fine Grained (Silt & Clay)		
U -- Undisturbed Tube	V. Loose: 0-4	Dense: 30-50	V. Soft: <2	Stiff: 8-15	and - 35-50%
C -- Rock Core	Loose: 4-10	V. Dense: >50	Soft: 2-4	V. Stiff: 15-30	some - 20-35%
A -- Auger Cuttings	M. Dense: 10-30		M. Stiff: 4-8	Hard: >30	little - 10-20%
					trace - <10%
					moisture, density, color, gradation

Soil Boring Log

CLIENT: USACE PROJECT NAME: FTMM PROJECT LOCATION: <u>PAR 51</u> PROJECT NUMBER: 748810- <u>07100</u>					INSPECTOR: <u>KM</u> DRILLER: <u>NICK</u> WEATHER: <u>cloudy 30F</u> CONTRACTOR: <u>Cascade</u>		BORING/WELL ID: <u>PAR-51-653</u> LOCATION DESCRIPTION: 	
GROUNDWATER OBSERVATIONS WATER LEVEL: <u>~6'</u> DATE: <u>11/10/17</u> TIME: MEAS. FROM:					RIG TYPE: <u>Geoprobe(R) 7822DT</u> DATE/TIME START: <u>1325 11/10/17</u> DATE/TIME FINISH: <u>1344 11/10/17</u> WEIGHT OF HAMMER: <u>N/A</u> DROP OF HAMMER: <u>N/A</u> TYPE OF HAMMER: <u>N/A</u>		LOCATION PLAN Oceanport, New Jersey	
DEPTH (feet)	SAMPLE I.D.	BLOWS per 6"	ADV/ REC.	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS	
0			<u>60/54</u>	<u>0</u>	Surface - grass + soil			
				<u>0</u>	0-1 - dry, brown, f-m sand			
1				<u>0</u>	1-4.5 - dry, light brown			
				<u>0</u>	f-m sand, dense			
2				<u>0</u>	some silt			
				<u>0</u>				
3				<u>0</u>				
				<u>0</u>				
4				<u>0</u>				
				<u>0</u>				
5			<u>NR</u>		5-6 - moist, light brown, stiff			
			<u>60/54</u>	<u>0</u>	silt, some clay, trace			
6				<u>0</u>	f-m sand			
				<u>0</u>	6-8 - wet, light brown			
7				<u>0</u>	f-m sand, dense, some			
				<u>0</u>	silt			
8				<u>0.1</u>	8-9.5 - wet, orange/brown			
				<u>0.2</u>	f-m sand, some silt, trace			
9				<u>0.3</u>	clay			
				<u>0</u>				
10			<u>NR</u>					
Remarks:								
Sample Types					Consistency vs. Blowcount / Foot			
S - Split-Spoon					Granular (Sand & Gravel)			
U - Undisturbed Tube					Fine Grained (Silt & Clay)			
C - Rock Core					V. Loose: 0-4 Dense: 30-50 V. Soft: <2 Stiff: 8-15			
A - Auger Cuttings					Loose: 4-10 V. Dense: >50 Soft: 2-4 V. Stiff: 15-30			
					M. Dense: 10-30 M. Stiff: 4-8 Hard: > 30			
					end - 35-50% some - 20-35% little - 10-20% trace - <10% moisture, density, color, gradation			

Soil Boring Log

CLIENT: USACE PROJECT NAME: FTMM PROJECT LOCATION: <u>PAR 51</u> PROJECT NUMBER: 748810-					INSPECTOR: <u>KM</u> DRILLER: <u>NICK</u> WEATHER: <u>cloudy 30F</u> CONTRACTOR: <u>Cascade</u> RIG TYPE: <u>Geoprobe(R) 7822DT</u> DATE/TIME START: <u>1325 1/10/17</u> DATE/TIME FINISH: <u>1344 1/10/17</u> WEIGHT OF HAMMER: <u>N/A</u> DROP OF HAMMER: <u>N/A</u> TYPE OF HAMMER: <u>N/A</u>		BORING/WELL ID: <u>PAR-51-653</u> LOCATION DESCRIPTION: LOCATION PLAN: Oceanport, New Jersey	
GROUNDWATER OBSERVATIONS WATER LEVEL: <u>5.10</u> DATE: TIME: MEAS. FROM:								
DEPTH (feet)	SAMPLE I.D.	BLOWS per 6"	ADV/ REC.	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS	
<u>1.0</u>			<u>60/60</u>	<u>0</u>	<u>10-11.5 wet, light brown, silty</u>			
				<u>0</u>	<u>Silt some clay</u>			
<u>1.1</u>				<u>0</u>	<u>11.5-12 wet, gray/brown</u>			
				<u>0</u>	<u>Soft silt</u>			
<u>1.2</u>				<u>0.4</u>	<u>12-13 wet orange brown</u>			
				<u>0.3</u>	<u>f-m sand, dense, some</u>			
				<u>0.2</u>	<u>silt, trace clay</u>			
<u>1.3</u>				<u>0.3</u>	<u>13-15 wet dark gray, silty</u>			
				<u>0.1</u>	<u>silt, some clay</u>			
<u>1.4</u>				<u>0.3</u>				
<u>1.5</u>			<u>60/60</u>	<u>0.2</u>	<u>EOB @ (SP)</u>			
				<u>0</u>	<u>15-15.5 wet, gray/brown silty</u>			
				<u>0</u>	<u>silt, some clay</u>			
<u>1.6</u>				<u>0</u>	<u>15.5-17 wet dark gray/brown</u>			
				<u>0</u>	<u>Soft silt, some brown</u>			
				<u>0</u>	<u>f-m sand</u>			
<u>1.7</u>				<u>0</u>	<u>17-20 wet, dark gray, silty</u>			
				<u>0</u>	<u>silt some f-m sand</u>			
<u>1.8</u>				<u>0.2</u>	<u>EOB @ 20' bgs</u>			
<u>1.9</u>				<u>0.2</u>				
<u>2.0</u>				<u>0.2</u>				

Remarks: Run For Analysis

Sample Types	Consistency vs. Blowcount / Foot				
S - Split-Spoon	Granular (Sand & Gravel)		Fine Grained (Silt & Clay)		
U - Undisturbed Tube	V. Loose: 0-4	Dense: 30-50	V. Soft: <2	Stiff: 8-15	and - 35-50%
C - Rock Core	Loose: 4-10	V. Dense: >50	Soft: 2-4	V. Stiff: 15-30	some - 20-35%
A - Auger Cuttings	M. Dense: 10-30		M. Stiff: 4-8	Hard: >30	little - 10-20%
					trace - <10%
					moisture, density, color, gradation

6W Sample
 PAR-51-653-THV-01-15.0

f-m silty 10ft screen
 set 4R
 below water table

Attachment E
Analytical Data

January 19, 2017

Ms.Cris Grill
Parsons - Boston MA
100 High St.
4th Floor
Boston, MA 02110

Certificate of Analysis

Project Name:	Ft. Monmouth Soils	Workorder:	2201488
Purchase Order:		Workorder ID:	PQF060 FTMM Parcel 51 Waters

Dear Ms.Cris Grill:

Enclosed are the analytical results for samples received by the laboratory on Wednesday, January 11, 2017.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Mrs. Vanessa N Badman (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

This laboratory report may not be reproduced, except in full, without the written approval of ALS Environmental.

ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

CC: Ms. Lorraine Weber

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.



Mrs. Vanessa N Badman
Project Coordinator

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SAMPLE SUMMARY

Workorder: 2201488 PQF060|FTMM Parcel 51 Waters

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2201488001	PAR-51-653-TMW-01-15.0	Water	1/10/2017 14:07	1/11/2017 21:10	Collected by Client
2201488002	PAR-51-TB-01102017	Water	1/11/2017 21:10	1/11/2017 21:10	Collected by Client
2201488003	PAR-51-EB-01102017	Water	1/10/2017 16:30	1/11/2017 21:10	Collected by Client
2201488004	PAR-51-545-TMW-01-14.0	Water	1/11/2017 08:15	1/11/2017 21:10	Collected by Client
2201488005	PAR-51-EB-01112017	Water	1/11/2017 11:00	1/11/2017 21:10	Collected by Client
2201488006	PAR-51-TB-01112017	Water	1/11/2017 21:10	1/11/2017 21:10	Collected by Client
2201488007	PAR-51-545-TMW-101-14.0	Water	1/11/2017 12:00	1/11/2017 21:10	Collected by Client

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SAMPLE SUMMARY

Workorder: 2201488 PQF060|FTMM Parcel 51 Waters

Notes

- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are performed in the laboratory and are therefore analyzed out of hold time.
- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".
- For microbiological analyses, the "Prepared" value is the date/time into the incubator and the "Analyzed" value is the date/time out the incubator.

Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits

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ANALYTICAL RESULTS

Workorder: 2201488 PQF060|FTMM Parcel 51 Waters

Lab ID: **2201488001** Date Collected: 1/10/2017 14:07 Matrix: Water
Sample ID: **PAR-51-653-TMW-01-15.0** Date Received: 1/11/2017 21:10

Parameters	Results	Flag	Units	LOQ	LOD	DL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS											
Acetone	4.3J	J	ug/L	5.0	3.8	1.6	SW846 8260C		1/13/17 03:44	CJG	D
Benzene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:44	CJG	D
Bromobenzene	0.75U	U	ug/L	1.0	0.75	0.20	SW846 8260C		1/13/17 03:44	CJG	D
Bromochloromethane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:44	CJG	D
Bromodichloromethane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:44	CJG	D
Bromoform	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:44	CJG	D
Bromomethane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:44	CJG	D
2-Butanone	3.8U	U	ug/L	5.0	3.8	1.6	SW846 8260C		1/13/17 03:44	CJG	D
tert-Butyl Alcohol	12.5U	U	ug/L	25.0	12.5	8.3	SW846 8260C		1/13/17 03:44	CJG	D
n-Butylbenzene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:44	CJG	D
tert-Butylbenzene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:44	CJG	D
sec-Butylbenzene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:44	CJG	D
Carbon Tetrachloride	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:44	CJG	D
Chlorobenzene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:44	CJG	D
Chlorodibromomethane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:44	CJG	D
Chloroethane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:44	CJG	D
Chloroform	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:44	CJG	D
Chloromethane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:44	CJG	D
o-Chlorotoluene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:44	CJG	D
p-Chlorotoluene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:44	CJG	D
1,2-Dibromo-3-chloropropane	2.5U	U	ug/L	5.0	2.5	1.6	SW846 8260C		1/13/17 03:44	CJG	D
1,2-Dibromoethane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:44	CJG	D
1,2-Dichlorobenzene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:44	CJG	D
1,3-Dichlorobenzene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:44	CJG	D
1,4-Dichlorobenzene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:44	CJG	D
Dichlorodifluoromethane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:44	CJG	D
1,1-Dichloroethane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:44	CJG	D
1,2-Dichloroethane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:44	CJG	D
1,1-Dichloroethene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:44	CJG	D
cis-1,2-Dichloroethene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:44	CJG	D
trans-1,2-Dichloroethene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:44	CJG	D
1,3-Dichloropropane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:44	CJG	D
2,2-Dichloropropane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:44	CJG	D
1,2-Dichloropropane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:44	CJG	D
1,1-Dichloropropene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:44	CJG	D
cis-1,3-Dichloropropene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:44	CJG	D

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ANALYTICAL RESULTS

Workorder: 2201488 PQF060|FTMM Parcel 51 Waters

Lab ID: **2201488001**

Date Collected: 1/10/2017 14:07

Matrix: Water

Sample ID: **PAR-51-653-TMW-01-15.0**

Date Received: 1/11/2017 21:10

Parameters	Results	Flag	Units	LOQ	LOD	DL	Method	Prepared By	Analyzed	By	Cntr
trans-1,3-Dichloropropene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:44	CJG	D
Ethylbenzene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:44	CJG	D
Hexachlorobutadiene	0.75U	U	ug/L	1.0	0.75	0.43	SW846 8260C		1/13/17 03:44	CJG	D
2-Hexanone	3.8U	U	ug/L	5.0	3.8	1.6	SW846 8260C		1/13/17 03:44	CJG	D
Isopropylbenzene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:44	CJG	D
p-Isopropyltoluene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:44	CJG	D
Methyl t-Butyl Ether	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:44	CJG	D
4-Methyl-2-Pentanone(MIBK)	3.8U	U	ug/L	5.0	3.8	1.6	SW846 8260C		1/13/17 03:44	CJG	D
Methylene Chloride	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:44	CJG	D
Naphthalene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:44	CJG	D
n-Propylbenzene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:44	CJG	D
Styrene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:44	CJG	D
1,1,1,2-Tetrachloroethane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:44	CJG	D
1,1,2,2-Tetrachloroethane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:44	CJG	D
Tetrachloroethene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:44	CJG	D
Toluene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:44	CJG	D
Total Xylenes	2.3U	U	ug/L	3.0	2.3	1.0	SW846 8260C		1/13/17 03:44	CJG	D
1,2,3-Trichlorobenzene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:44	CJG	D
1,2,4-Trichlorobenzene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:44	CJG	D
1,1,1-Trichloroethane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:44	CJG	D
1,1,2-Trichloroethane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:44	CJG	D
Trichloroethene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:44	CJG	D
Trichlorofluoromethane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:44	CJG	D
1,2,3-Trichloropropane	2.5U	U	ug/L	5.0	2.5	1.6	SW846 8260C		1/13/17 03:44	CJG	D
1,2,4-Trimethylbenzene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:44	CJG	D
1,3,5-Trimethylbenzene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:44	CJG	D
Vinyl Chloride	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:44	CJG	D
o-Xylene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:44	CJG	D
mp-Xylene	1.5U	U	ug/L	2.0	1.5	0.66	SW846 8260C		1/13/17 03:44	CJG	D
Surrogate Recoveries	Results	Flag	Units	Limits			Method	Prepared By	Analyzed	By	Cntr
1,2-Dichloroethane-d4 (S)	108		%	81 - 118			SW846 8260C		1/13/17 03:44	CJG	D
4-Bromofluorobenzene (S)	107		%	85 - 114			SW846 8260C		1/13/17 03:44	CJG	D
Dibromofluoromethane (S)	91		%	80 - 119			SW846 8260C		1/13/17 03:44	CJG	D
Toluene-d8 (S)	97.1		%	89 - 112			SW846 8260C		1/13/17 03:44	CJG	D
LIBRARY SEARCH - VOLATILES											
No TIC's Detected	.						Lib Search VOC		1/13/17 03:44	CPK	D

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ANALYTICAL RESULTS

Workorder: 2201488 PQF060|FTMM Parcel 51 Waters

Lab ID: **2201488001**
Sample ID: **PAR-51-653-TMW-01-15.0**

Date Collected: 1/10/2017 14:07 Matrix: Water
Date Received: 1/11/2017 21:10

Parameters	Results	Flag	Units	LOQ	LOD	DL	Method	Prepared By	Analyzed	By	Cntr
SEMIVOLATILES											
Acenaphthene	0.98U	U	ug/L	2.0	0.98	0.15	SW846 8270D	1/13/17 PDK	1/17/17 17:34	CGS	B
Acenaphthylene	0.98U	U	ug/L	2.0	0.98	0.19	SW846 8270D	1/13/17 PDK	1/17/17 17:34	CGS	B
Anthracene	0.98U	U	ug/L	2.0	0.98	0.15	SW846 8270D	1/13/17 PDK	1/17/17 17:34	CGS	B
Benzidine	29.3U	U1	ug/L	29.3	29.3	3.0	SW846 8270D	1/13/17 PDK	1/17/17 17:34	CGS	B
Benzo(a)anthracene	0.98U	U	ug/L	2.0	0.98	0.13	SW846 8270D	1/13/17 PDK	1/17/17 17:34	CGS	B
Benzo(a)pyrene	0.98U	U	ug/L	2.0	0.98	0.21	SW846 8270D	1/13/17 PDK	1/17/17 17:34	CGS	B
Benzo(b)fluoranthene	0.98U	U	ug/L	2.0	0.98	0.11	SW846 8270D	1/13/17 PDK	1/17/17 17:34	CGS	B
Benzo(g,h,i)perylene	0.98U	U	ug/L	2.0	0.98	0.21	SW846 8270D	1/13/17 PDK	1/17/17 17:34	CGS	B
Benzo(k)fluoranthene	0.98U	U	ug/L	2.0	0.98	0.19	SW846 8270D	1/13/17 PDK	1/17/17 17:34	CGS	B
Benzyl Alcohol	2.0U	U	ug/L	7.8	2.0	0.22	SW846 8270D	1/13/17 PDK	1/17/17 17:34	CGS	B
4-Bromophenyl-phenylether	0.98U	U	ug/L	7.8	0.98	0.17	SW846 8270D	1/13/17 PDK	1/17/17 17:34	CGS	B
Butylbenzylphthalate	0.98U	U	ug/L	7.8	0.98	0.11	SW846 8270D	1/13/17 PDK	1/17/17 17:34	CGS	B
Carbazole	0.98U	U	ug/L	7.8	0.98	0.12	SW846 8270D	1/13/17 PDK	1/17/17 17:34	CGS	B
4-Chloro-3-methylphenol	0.98U	U	ug/L	7.8	0.98	0.19	SW846 8270D	1/13/17 PDK	1/17/17 17:34	CGS	B
4-Chloroaniline	0.98U	U	ug/L	7.8	0.98	0.20	SW846 8270D	1/13/17 PDK	1/17/17 17:34	CGS	B
bis(2-Chloroethoxy)methane	0.98U	U	ug/L	7.8	0.98	0.20	SW846 8270D	1/13/17 PDK	1/17/17 17:34	CGS	B
bis(2-Chloroethyl)ether	0.98U	U	ug/L	7.8	0.98	0.17	SW846 8270D	1/13/17 PDK	1/17/17 17:34	CGS	B
bis(2-Chloroisopropyl)ether	0.98U	U	ug/L	7.8	0.98	0.27	SW846 8270D	1/13/17 PDK	1/17/17 17:34	CGS	B
2-Chloronaphthalene	0.98U	U	ug/L	7.8	0.98	0.18	SW846 8270D	1/13/17 PDK	1/17/17 17:34	CGS	B
2-Chlorophenol	2.0U	U	ug/L	7.8	2.0	0.32	SW846 8270D	1/13/17 PDK	1/17/17 17:34	CGS	B
4-Chlorophenyl-phenylether	0.98U	U	ug/L	7.8	0.98	0.14	SW846 8270D	1/13/17 PDK	1/17/17 17:34	CGS	B
Chrysene	0.98U	U	ug/L	2.0	0.98	0.12	SW846 8270D	1/13/17 PDK	1/17/17 17:34	CGS	B
mp-Cresol	0.98U	U	ug/L	7.8	0.98	0.15	SW846 8270D	1/13/17 PDK	1/17/17 17:34	CGS	B
o-Cresol	0.98U	U	ug/L	7.8	0.98	0.24	SW846 8270D	1/13/17 PDK	1/17/17 17:34	CGS	B
Di-n-Butylphthalate	0.14J	J	ug/L	7.8	0.98	0.14	SW846 8270D	1/13/17 PDK	1/17/17 17:34	CGS	B
Di-n-Octylphthalate	0.98U	U	ug/L	7.8	0.98	0.098	SW846 8270D	1/13/17 PDK	1/17/17 17:34	CGS	B
Dibenzo(a,h)anthracene	0.98U	U	ug/L	2.0	0.98	0.20	SW846 8270D	1/13/17 PDK	1/17/17 17:34	CGS	B
Dibenzofuran	0.98U	U	ug/L	7.8	0.98	0.11	SW846 8270D	1/13/17 PDK	1/17/17 17:34	CGS	B
1,2-Dichlorobenzene	0.98U	U	ug/L	7.8	0.98	0.20	SW846 8270D	1/13/17 PDK	1/17/17 17:34	CGS	B
1,3-Dichlorobenzene	0.98U	U	ug/L	7.8	0.98	0.17	SW846 8270D	1/13/17 PDK	1/17/17 17:34	CGS	B
1,4-Dichlorobenzene	0.98U	U	ug/L	7.8	0.98	0.18	SW846 8270D	1/13/17 PDK	1/17/17 17:34	CGS	B
3,3-Dichlorobenzidine	2.9U	U	ug/L	15.6	2.9	0.47	SW846 8270D	1/13/17 PDK	1/17/17 17:34	CGS	B
2,4-Dichlorophenol	0.98U	U	ug/L	7.8	0.98	0.31	SW846 8270D	1/13/17 PDK	1/17/17 17:34	CGS	B
Diethylphthalate	0.98U	U	ug/L	7.8	0.98	0.18	SW846 8270D	1/13/17 PDK	1/17/17 17:34	CGS	B
2,4-Dimethylphenol	4.9U	U	ug/L	7.8	4.9	0.20	SW846 8270D	1/13/17 PDK	1/17/17 17:34	CGS	B
Dimethylphthalate	0.98U	U	ug/L	7.8	0.98	0.14	SW846 8270D	1/13/17 PDK	1/17/17 17:34	CGS	B
2,4-Dinitrophenol	7.8U	U	ug/L	15.6	7.8	1.8	SW846 8270D	1/13/17 PDK	1/17/17 17:34	CGS	B

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ANALYTICAL RESULTS

Workorder: 2201488 PQF060|FTMM Parcel 51 Waters

Lab ID: **2201488001**
Sample ID: **PAR-51-653-TMW-01-15.0**

Date Collected: 1/10/2017 14:07 Matrix: Water
Date Received: 1/11/2017 21:10

Parameters	Results	Flag	Units	LOQ	LOD	DL	Method	Prepared By	Analyzed	By	Cntr
2,4-Dinitrotoluene	0.98U	U	ug/L	7.8	0.98	0.12	SW846 8270D	1/13/17 PDK	1/17/17 17:34	CGS	B
2,6-Dinitrotoluene	0.98U	U	ug/L	7.8	0.98	0.20	SW846 8270D	1/13/17 PDK	1/17/17 17:34	CGS	B
1,2-Diphenylhydrazine	0.98U	U	ug/L	7.8	0.98	0.25	SW846 8270D	1/13/17 PDK	1/17/17 17:34	CGS	B
bis(2-Ethylhexyl)phthalate	0.33J	J	ug/L	7.8	0.98	0.21	SW846 8270D	1/13/17 PDK	1/17/17 17:34	CGS	B
Fluoranthene	0.98U	U	ug/L	2.0	0.98	0.17	SW846 8270D	1/13/17 PDK	1/17/17 17:34	CGS	B
Fluorene	0.98U	U	ug/L	2.0	0.98	0.20	SW846 8270D	1/13/17 PDK	1/17/17 17:34	CGS	B
Hexachlorobenzene	0.98U	U	ug/L	7.8	0.98	0.22	SW846 8270D	1/13/17 PDK	1/17/17 17:34	CGS	B
Hexachlorobutadiene	0.98U	U	ug/L	7.8	0.98	0.19	SW846 8270D	1/13/17 PDK	1/17/17 17:34	CGS	B
Hexachlorocyclopentadiene	2.0U	U	ug/L	7.8	2.0	0.17	SW846 8270D	1/13/17 PDK	1/17/17 17:34	CGS	B
Hexachloroethane	0.98U	U	ug/L	7.8	0.98	0.29	SW846 8270D	1/13/17 PDK	1/17/17 17:34	CGS	B
Indeno(1,2,3-cd)pyrene	0.98U	U	ug/L	2.0	0.98	0.098	SW846 8270D	1/13/17 PDK	1/17/17 17:34	CGS	B
Isophorone	0.98U	U	ug/L	7.8	0.98	0.15	SW846 8270D	1/13/17 PDK	1/17/17 17:34	CGS	B
2-Methyl-4,6-dinitrophenol	4.9U	U	ug/L	7.8	4.9	0.32	SW846 8270D	1/13/17 PDK	1/17/17 17:34	CGS	B
2-Methylnaphthalene	0.98U	U	ug/L	2.0	0.98	0.16	SW846 8270D	1/13/17 PDK	1/17/17 17:34	CGS	B
Naphthalene	0.98U	U	ug/L	2.0	0.98	0.12	SW846 8270D	1/13/17 PDK	1/17/17 17:34	CGS	B
2-Nitroaniline	0.98U	U	ug/L	7.8	0.98	0.20	SW846 8270D	1/13/17 PDK	1/17/17 17:34	CGS	B
3-Nitroaniline	2.0U	U	ug/L	7.8	2.0	0.18	SW846 8270D	1/13/17 PDK	1/17/17 17:34	CGS	B
4-Nitroaniline	0.98U	U	ug/L	7.8	0.98	0.40	SW846 8270D	1/13/17 PDK	1/17/17 17:34	CGS	B
Nitrobenzene	2.0U	U	ug/L	7.8	2.0	0.27	SW846 8270D	1/13/17 PDK	1/17/17 17:34	CGS	B
2-Nitrophenol	2.0U	U	ug/L	7.8	2.0	0.44	SW846 8270D	1/13/17 PDK	1/17/17 17:34	CGS	B
4-Nitrophenol	4.9U	U	ug/L	7.8	4.9	1.0	SW846 8270D	1/13/17 PDK	1/17/17 17:34	CGS	B
N-Nitrosodimethylamine	2.0U	U	ug/L	7.8	2.0	0.62	SW846 8270D	1/13/17 PDK	1/17/17 17:34	CGS	B
N-Nitroso-di-n-propylamine	0.98U	U	ug/L	7.8	0.98	0.23	SW846 8270D	1/13/17 PDK	1/17/17 17:34	CGS	B
N-Nitrosodiphenylamine	2.0U	U	ug/L	7.8	2.0	0.18	SW846 8270D	1/13/17 PDK	1/17/17 17:34	CGS	B
Pentachlorophenol	7.8U	U	ug/L	15.6	7.8	1.0	SW846 8270D	1/13/17 PDK	1/17/17 17:34	CGS	B
Phenanthrene	0.98U	U	ug/L	2.0	0.98	0.13	SW846 8270D	1/13/17 PDK	1/17/17 17:34	CGS	B
Phenol	0.98U	U	ug/L	7.8	0.98	0.22	SW846 8270D	1/13/17 PDK	1/17/17 17:34	CGS	B
Pyrene	0.98U	U	ug/L	2.0	0.98	0.16	SW846 8270D	1/13/17 PDK	1/17/17 17:34	CGS	B
1,2,4-Trichlorobenzene	0.98U	U	ug/L	7.8	0.98	0.13	SW846 8270D	1/13/17 PDK	1/17/17 17:34	CGS	B
2,4,5-Trichlorophenol	2.9U	U	ug/L	7.8	2.9	0.54	SW846 8270D	1/13/17 PDK	1/17/17 17:34	CGS	B
2,4,6-Trichlorophenol	0.98U	U	ug/L	7.8	0.98	0.56	SW846 8270D	1/13/17 PDK	1/17/17 17:34	CGS	B
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>			<i>Method</i>	<i>Prepared By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
2,4,6-Tribromophenol (S)	45.4		%	43 - 140			SW846 8270D	1/13/17 PDK	1/17/17 17:34	CGS	B
2-Fluorobiphenyl (S)	43.8	2	%	44 - 119			SW846 8270D	1/13/17 PDK	1/17/17 17:34	CGS	B
2-Fluorophenol (S)	26.5		%	19 - 119			SW846 8270D	1/13/17 PDK	1/17/17 17:34	CGS	B
Nitrobenzene-d5 (S)	49.2		%	44 - 120			SW846 8270D	1/13/17 PDK	1/17/17 17:34	CGS	B
Phenol-d5 (S)	16.9		%	13 - 49			SW846 8270D	1/13/17 PDK	1/17/17 17:34	CGS	B
Terphenyl-d14 (S)	22.4	3	%	50 - 134			SW846 8270D	1/13/17 PDK	1/17/17 17:34	CGS	B

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ANALYTICAL RESULTS

Workorder: 2201488 PQF060|FTMM Parcel 51 Waters

Lab ID: **2201488001** Date Collected: 1/10/2017 14:07 Matrix: Water
Sample ID: **PAR-51-653-TMW-01-15.0** Date Received: 1/11/2017 21:10

Parameters	Results	Flag	Units	LOQ	LOD	DL	Method	Prepared By	Analyzed	By	Cntr
Library Search - SemiVolatiles											
Cyclohexene	11.4	J N	ug/L				SW846 8270D	1/13/17 PDK	1/17/17 17:34	CGS	B
Unknown	4.3	J	ug/L				SW846 8270D	1/13/17 PDK	1/17/17 17:34	CGS	B
Unknown	7.5	J	ug/L				SW846 8270D	1/13/17 PDK	1/17/17 17:34	CGS	B
Hexadecanoic acid	6.8	J N	ug/L				SW846 8270D	1/13/17 PDK	1/17/17 17:34	CGS	B
Octadecanoic acid	6.8	J N	ug/L				SW846 8270D	1/13/17 PDK	1/17/17 17:34	CGS	B
Unknown	4.8	J	ug/L				SW846 8270D	1/13/17 PDK	1/17/17 17:34	CGS	B
Unknown	4.5	J	ug/L				SW846 8270D	1/13/17 PDK	1/17/17 17:34	CGS	B
Unknown	4.5	J	ug/L				SW846 8270D	1/13/17 PDK	1/17/17 17:34	CGS	B



Mrs. Vanessa N Badman
Project Coordinator

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**ANALYTICAL RESULTS**

Workorder: 2201488 PQF060|FTMM Parcel 51 Waters

Lab ID: **2201488002**

Date Collected: 1/11/2017 21:10

Matrix: Water

Sample ID: **PAR-51-TB-01102017**

Date Received: 1/11/2017 21:10

Parameters	Results	Flag	Units	LOQ	LOD	DL	Method	Prepared By	Analyzed	By	Cntr
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ADMINISTRATIVE

Sample Cancelled

CANCEL
LED.

1/12/17 12:38 VNB

Mrs. Vanessa N Badman
Project Coordinator**ALS Environmental Laboratory Locations Across North America****Canada:** Burlington · Calgary · Centre of Excellence · Edmonton · Fort McMurray · Fort St. John · Grande Prairie · London · Mississauga · Richmond Hill · Saskatoon · Thunder Bay
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ANALYTICAL RESULTS

Workorder: 2201488 PQF060|FTMM Parcel 51 Waters

Lab ID: **2201488003**

Date Collected: 1/10/2017 16:30

Matrix: Water

Sample ID: **PAR-51-EB-01102017**

Date Received: 1/11/2017 21:10

Parameters	Results	Flag	Units	LOQ	LOD	DL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS											
Acetone	3.8U	U	ug/L	5.0	3.8	1.6	SW846 8260C		1/13/17 02:39	CJG	E
Benzene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 02:39	CJG	E
Bromobenzene	0.75U	U	ug/L	1.0	0.75	0.20	SW846 8260C		1/13/17 02:39	CJG	E
Bromochloromethane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 02:39	CJG	E
Bromodichloromethane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 02:39	CJG	E
Bromoform	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 02:39	CJG	E
Bromomethane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 02:39	CJG	E
2-Butanone	3.8U	U	ug/L	5.0	3.8	1.6	SW846 8260C		1/13/17 02:39	CJG	E
tert-Butyl Alcohol	12.5U	U	ug/L	25.0	12.5	8.3	SW846 8260C		1/13/17 02:39	CJG	E
n-Butylbenzene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 02:39	CJG	E
tert-Butylbenzene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 02:39	CJG	E
sec-Butylbenzene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 02:39	CJG	E
Carbon Tetrachloride	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 02:39	CJG	E
Chlorobenzene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 02:39	CJG	E
Chlorodibromomethane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 02:39	CJG	E
Chloroethane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 02:39	CJG	E
Chloroform	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 02:39	CJG	E
Chloromethane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 02:39	CJG	E
o-Chlorotoluene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 02:39	CJG	E
p-Chlorotoluene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 02:39	CJG	E
1,2-Dibromo-3-chloropropane	2.5U	U	ug/L	5.0	2.5	1.6	SW846 8260C		1/13/17 02:39	CJG	E
1,2-Dibromoethane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 02:39	CJG	E
1,2-Dichlorobenzene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 02:39	CJG	E
1,3-Dichlorobenzene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 02:39	CJG	E
1,4-Dichlorobenzene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 02:39	CJG	E
Dichlorodifluoromethane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 02:39	CJG	E
1,1-Dichloroethane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 02:39	CJG	E
1,2-Dichloroethane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 02:39	CJG	E
1,1-Dichloroethene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 02:39	CJG	E
cis-1,2-Dichloroethene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 02:39	CJG	E
trans-1,2-Dichloroethene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 02:39	CJG	E
1,3-Dichloropropane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 02:39	CJG	E
2,2-Dichloropropane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 02:39	CJG	E
1,2-Dichloropropane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 02:39	CJG	E
1,1-Dichloropropene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 02:39	CJG	E
cis-1,3-Dichloropropene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 02:39	CJG	E

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ANALYTICAL RESULTS

Workorder: 2201488 PQF060|FTMM Parcel 51 Waters

Lab ID: **2201488003**

Date Collected: 1/10/2017 16:30

Matrix: Water

Sample ID: **PAR-51-EB-01102017**

Date Received: 1/11/2017 21:10

Parameters	Results	Flag	Units	LOQ	LOD	DL	Method	Prepared By	Analyzed	By	Cntr
trans-1,3-Dichloropropene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 02:39	CJG	E
Ethylbenzene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 02:39	CJG	E
Hexachlorobutadiene	0.75U	U	ug/L	1.0	0.75	0.43	SW846 8260C		1/13/17 02:39	CJG	E
2-Hexanone	3.8U	U	ug/L	5.0	3.8	1.6	SW846 8260C		1/13/17 02:39	CJG	E
Isopropylbenzene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 02:39	CJG	E
p-Isopropyltoluene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 02:39	CJG	E
Methyl t-Butyl Ether	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 02:39	CJG	E
4-Methyl-2-Pentanone(MIBK)	3.8U	U	ug/L	5.0	3.8	1.6	SW846 8260C		1/13/17 02:39	CJG	E
Methylene Chloride	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 02:39	CJG	E
Naphthalene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 02:39	CJG	E
n-Propylbenzene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 02:39	CJG	E
Styrene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 02:39	CJG	E
1,1,1,2-Tetrachloroethane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 02:39	CJG	E
1,1,2,2-Tetrachloroethane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 02:39	CJG	E
Tetrachloroethene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 02:39	CJG	E
Toluene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 02:39	CJG	E
Total Xylenes	2.3U	U	ug/L	3.0	2.3	1.0	SW846 8260C		1/13/17 02:39	CJG	E
1,2,3-Trichlorobenzene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 02:39	CJG	E
1,2,4-Trichlorobenzene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 02:39	CJG	E
1,1,1-Trichloroethane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 02:39	CJG	E
1,1,2-Trichloroethane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 02:39	CJG	E
Trichloroethene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 02:39	CJG	E
Trichlorofluoromethane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 02:39	CJG	E
1,2,3-Trichloropropane	2.5U	U	ug/L	5.0	2.5	1.6	SW846 8260C		1/13/17 02:39	CJG	E
1,2,4-Trimethylbenzene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 02:39	CJG	E
1,3,5-Trimethylbenzene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 02:39	CJG	E
Vinyl Chloride	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 02:39	CJG	E
o-Xylene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 02:39	CJG	E
mp-Xylene	1.5U	U	ug/L	2.0	1.5	0.66	SW846 8260C		1/13/17 02:39	CJG	E
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>			<i>Method</i>	<i>Prepared By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	107		%	81 - 118			SW846 8260C		1/13/17 02:39	CJG	E
4-Bromofluorobenzene (S)	107		%	85 - 114			SW846 8260C		1/13/17 02:39	CJG	E
Dibromofluoromethane (S)	89.9		%	80 - 119			SW846 8260C		1/13/17 02:39	CJG	E
Toluene-d8 (S)	96.8		%	89 - 112			SW846 8260C		1/13/17 02:39	CJG	E
LIBRARY SEARCH - VOLATILES											
No TIC's Detected	.						Lib Search VOC		1/13/17 02:39	CPK	E

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ANALYTICAL RESULTS

Workorder: 2201488 PQF060|FTMM Parcel 51 Waters

Lab ID: **2201488003**

Date Collected: 1/10/2017 16:30

Matrix: Water

Sample ID: **PAR-51-EB-01102017**

Date Received: 1/11/2017 21:10

Parameters	Results	Flag	Units	LOQ	LOD	DL	Method	Prepared By	Analyzed	By	Cntr
SEMIVOLATILES											
Acenaphthene	0.93U	U	ug/L	1.9	0.93	0.14	SW846 8270D	1/13/17 PDK	1/17/17 17:59	CGS	B
Acenaphthylene	0.93U	U	ug/L	1.9	0.93	0.18	SW846 8270D	1/13/17 PDK	1/17/17 17:59	CGS	B
Anthracene	0.93U	U	ug/L	1.9	0.93	0.14	SW846 8270D	1/13/17 PDK	1/17/17 17:59	CGS	B
Benzidine	28.0U	U1	ug/L	28.0	28.0	2.9	SW846 8270D	1/13/17 PDK	1/17/17 17:59	CGS	B
Benzo(a)anthracene	0.93U	U	ug/L	1.9	0.93	0.12	SW846 8270D	1/13/17 PDK	1/17/17 17:59	CGS	B
Benzo(a)pyrene	0.93U	U	ug/L	1.9	0.93	0.21	SW846 8270D	1/13/17 PDK	1/17/17 17:59	CGS	B
Benzo(b)fluoranthene	0.93U	U	ug/L	1.9	0.93	0.10	SW846 8270D	1/13/17 PDK	1/17/17 17:59	CGS	B
Benzo(g,h,i)perylene	0.93U	U	ug/L	1.9	0.93	0.21	SW846 8270D	1/13/17 PDK	1/17/17 17:59	CGS	B
Benzo(k)fluoranthene	0.93U	U	ug/L	1.9	0.93	0.18	SW846 8270D	1/13/17 PDK	1/17/17 17:59	CGS	B
Benzyl Alcohol	1.9U	U	ug/L	7.5	1.9	0.21	SW846 8270D	1/13/17 PDK	1/17/17 17:59	CGS	B
4-Bromophenyl-phenylether	0.93U	U	ug/L	7.5	0.93	0.16	SW846 8270D	1/13/17 PDK	1/17/17 17:59	CGS	B
Butylbenzylphthalate	0.15J	J	ug/L	7.5	0.93	0.10	SW846 8270D	1/13/17 PDK	1/17/17 17:59	CGS	B
Carbazole	0.93U	U	ug/L	7.5	0.93	0.11	SW846 8270D	1/13/17 PDK	1/17/17 17:59	CGS	B
4-Chloro-3-methylphenol	0.93U	U	ug/L	7.5	0.93	0.18	SW846 8270D	1/13/17 PDK	1/17/17 17:59	CGS	B
4-Chloroaniline	0.93U	U	ug/L	7.5	0.93	0.20	SW846 8270D	1/13/17 PDK	1/17/17 17:59	CGS	B
bis(2-Chloroethoxy)methane	0.93U	U	ug/L	7.5	0.93	0.20	SW846 8270D	1/13/17 PDK	1/17/17 17:59	CGS	B
bis(2-Chloroethyl)ether	0.93U	U	ug/L	7.5	0.93	0.16	SW846 8270D	1/13/17 PDK	1/17/17 17:59	CGS	B
bis(2-Chloroisopropyl)ether	0.93U	U	ug/L	7.5	0.93	0.26	SW846 8270D	1/13/17 PDK	1/17/17 17:59	CGS	B
2-Chloronaphthalene	0.93U	U	ug/L	7.5	0.93	0.17	SW846 8270D	1/13/17 PDK	1/17/17 17:59	CGS	B
2-Chlorophenol	1.9U	U	ug/L	7.5	1.9	0.31	SW846 8270D	1/13/17 PDK	1/17/17 17:59	CGS	B
4-Chlorophenyl-phenylether	0.93U	U	ug/L	7.5	0.93	0.13	SW846 8270D	1/13/17 PDK	1/17/17 17:59	CGS	B
Chrysene	0.93U	U	ug/L	1.9	0.93	0.11	SW846 8270D	1/13/17 PDK	1/17/17 17:59	CGS	B
mp-Cresol	0.93U	U	ug/L	7.5	0.93	0.14	SW846 8270D	1/13/17 PDK	1/17/17 17:59	CGS	B
o-Cresol	0.93U	U	ug/L	7.5	0.93	0.23	SW846 8270D	1/13/17 PDK	1/17/17 17:59	CGS	B
Di-n-Butylphthalate	0.93U	U	ug/L	7.5	0.93	0.13	SW846 8270D	1/13/17 PDK	1/17/17 17:59	CGS	B
Di-n-Octylphthalate	0.93U	U	ug/L	7.5	0.93	0.093	SW846 8270D	1/13/17 PDK	1/17/17 17:59	CGS	B
Dibenzo(a,h)anthracene	0.93U	U	ug/L	1.9	0.93	0.20	SW846 8270D	1/13/17 PDK	1/17/17 17:59	CGS	B
Dibenzofuran	0.93U	U	ug/L	7.5	0.93	0.10	SW846 8270D	1/13/17 PDK	1/17/17 17:59	CGS	B
1,2-Dichlorobenzene	0.93U	U	ug/L	7.5	0.93	0.19	SW846 8270D	1/13/17 PDK	1/17/17 17:59	CGS	B
1,3-Dichlorobenzene	0.93U	U	ug/L	7.5	0.93	0.16	SW846 8270D	1/13/17 PDK	1/17/17 17:59	CGS	B
1,4-Dichlorobenzene	0.93U	U	ug/L	7.5	0.93	0.17	SW846 8270D	1/13/17 PDK	1/17/17 17:59	CGS	B
3,3-Dichlorobenzidine	2.8U	U	ug/L	15.0	2.8	0.45	SW846 8270D	1/13/17 PDK	1/17/17 17:59	CGS	B
2,4-Dichlorophenol	0.93U	U	ug/L	7.5	0.93	0.30	SW846 8270D	1/13/17 PDK	1/17/17 17:59	CGS	B
Diethylphthalate	0.93U	U	ug/L	7.5	0.93	0.17	SW846 8270D	1/13/17 PDK	1/17/17 17:59	CGS	B
2,4-Dimethylphenol	4.7U	U	ug/L	7.5	4.7	0.20	SW846 8270D	1/13/17 PDK	1/17/17 17:59	CGS	B
Dimethylphthalate	0.93U	U	ug/L	7.5	0.93	0.13	SW846 8270D	1/13/17 PDK	1/17/17 17:59	CGS	B
2,4-Dinitrophenol	7.5U	U	ug/L	15.0	7.5	1.7	SW846 8270D	1/13/17 PDK	1/17/17 17:59	CGS	B

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ANALYTICAL RESULTS

Workorder: 2201488 PQF060|FTMM Parcel 51 Waters

Lab ID: **2201488003**

Date Collected: 1/10/2017 16:30

Matrix: Water

Sample ID: **PAR-51-EB-01102017**

Date Received: 1/11/2017 21:10

Parameters	Results	Flag	Units	LOQ	LOD	DL	Method	Prepared By	Analyzed	By	Cntr
2,4-Dinitrotoluene	0.93U	U	ug/L	7.5	0.93	0.11	SW846 8270D	1/13/17 PDK	1/17/17 17:59	CGS	B
2,6-Dinitrotoluene	0.79J	J	ug/L	7.5	0.93	0.20	SW846 8270D	1/13/17 PDK	1/17/17 17:59	CGS	B
1,2-Diphenylhydrazine	0.93U	U	ug/L	7.5	0.93	0.24	SW846 8270D	1/13/17 PDK	1/17/17 17:59	CGS	B
bis(2-Ethylhexyl)phthalate	0.93U	U	ug/L	7.5	0.93	0.21	SW846 8270D	1/13/17 PDK	1/17/17 17:59	CGS	B
Fluoranthene	0.93U	U	ug/L	1.9	0.93	0.16	SW846 8270D	1/13/17 PDK	1/17/17 17:59	CGS	B
Fluorene	0.93U	U	ug/L	1.9	0.93	0.19	SW846 8270D	1/13/17 PDK	1/17/17 17:59	CGS	B
Hexachlorobenzene	0.93U	U	ug/L	7.5	0.93	0.21	SW846 8270D	1/13/17 PDK	1/17/17 17:59	CGS	B
Hexachlorobutadiene	0.93U	U	ug/L	7.5	0.93	0.18	SW846 8270D	1/13/17 PDK	1/17/17 17:59	CGS	B
Hexachlorocyclopentadiene	1.9U	U	ug/L	7.5	1.9	0.16	SW846 8270D	1/13/17 PDK	1/17/17 17:59	CGS	B
Hexachloroethane	0.93U	U	ug/L	7.5	0.93	0.28	SW846 8270D	1/13/17 PDK	1/17/17 17:59	CGS	B
Indeno(1,2,3-cd)pyrene	0.93U	U	ug/L	1.9	0.93	0.093	SW846 8270D	1/13/17 PDK	1/17/17 17:59	CGS	B
Isophorone	0.93U	U	ug/L	7.5	0.93	0.14	SW846 8270D	1/13/17 PDK	1/17/17 17:59	CGS	B
2-Methyl-4,6-dinitrophenol	4.7U	U	ug/L	7.5	4.7	0.31	SW846 8270D	1/13/17 PDK	1/17/17 17:59	CGS	B
2-Methylnaphthalene	0.93U	U	ug/L	1.9	0.93	0.15	SW846 8270D	1/13/17 PDK	1/17/17 17:59	CGS	B
Naphthalene	0.93U	U	ug/L	1.9	0.93	0.11	SW846 8270D	1/13/17 PDK	1/17/17 17:59	CGS	B
2-Nitroaniline	0.93U	U	ug/L	7.5	0.93	0.19	SW846 8270D	1/13/17 PDK	1/17/17 17:59	CGS	B
3-Nitroaniline	1.9U	U	ug/L	7.5	1.9	0.17	SW846 8270D	1/13/17 PDK	1/17/17 17:59	CGS	B
4-Nitroaniline	0.93U	U	ug/L	7.5	0.93	0.38	SW846 8270D	1/13/17 PDK	1/17/17 17:59	CGS	B
Nitrobenzene	1.9U	U	ug/L	7.5	1.9	0.26	SW846 8270D	1/13/17 PDK	1/17/17 17:59	CGS	B
2-Nitrophenol	1.9U	U	ug/L	7.5	1.9	0.42	SW846 8270D	1/13/17 PDK	1/17/17 17:59	CGS	B
4-Nitrophenol	4.7U	U	ug/L	7.5	4.7	0.98	SW846 8270D	1/13/17 PDK	1/17/17 17:59	CGS	B
N-Nitrosodimethylamine	1.9U	U	ug/L	7.5	1.9	0.60	SW846 8270D	1/13/17 PDK	1/17/17 17:59	CGS	B
N-Nitroso-di-n-propylamine	0.93U	U	ug/L	7.5	0.93	0.22	SW846 8270D	1/13/17 PDK	1/17/17 17:59	CGS	B
N-Nitrosodiphenylamine	1.9U	U	ug/L	7.5	1.9	0.17	SW846 8270D	1/13/17 PDK	1/17/17 17:59	CGS	B
Pentachlorophenol	7.5U	U	ug/L	15.0	7.5	1.0	SW846 8270D	1/13/17 PDK	1/17/17 17:59	CGS	B
Phenanthrene	0.93U	U	ug/L	1.9	0.93	0.12	SW846 8270D	1/13/17 PDK	1/17/17 17:59	CGS	B
Phenol	0.93U	U	ug/L	7.5	0.93	0.21	SW846 8270D	1/13/17 PDK	1/17/17 17:59	CGS	B
Pyrene	0.93U	U	ug/L	1.9	0.93	0.15	SW846 8270D	1/13/17 PDK	1/17/17 17:59	CGS	B
1,2,4-Trichlorobenzene	0.93U	U	ug/L	7.5	0.93	0.12	SW846 8270D	1/13/17 PDK	1/17/17 17:59	CGS	B
2,4,5-Trichlorophenol	2.8U	U	ug/L	7.5	2.8	0.51	SW846 8270D	1/13/17 PDK	1/17/17 17:59	CGS	B
2,4,6-Trichlorophenol	0.93U	U	ug/L	7.5	0.93	0.53	SW846 8270D	1/13/17 PDK	1/17/17 17:59	CGS	B
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>			<i>Method</i>	<i>Prepared By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
2,4,6-Tribromophenol (S)	79.2		%	43 - 140			SW846 8270D	1/13/17 PDK	1/17/17 17:59	CGS	B
2-Fluorobiphenyl (S)	87.3		%	44 - 119			SW846 8270D	1/13/17 PDK	1/17/17 17:59	CGS	B
2-Fluorophenol (S)	46.6		%	19 - 119			SW846 8270D	1/13/17 PDK	1/17/17 17:59	CGS	B
Nitrobenzene-d5 (S)	73.7		%	44 - 120			SW846 8270D	1/13/17 PDK	1/17/17 17:59	CGS	B
Phenol-d5 (S)	27.1		%	13 - 49			SW846 8270D	1/13/17 PDK	1/17/17 17:59	CGS	B
Terphenyl-d14 (S)	77		%	50 - 134			SW846 8270D	1/13/17 PDK	1/17/17 17:59	CGS	B

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ANALYTICAL RESULTS

Workorder: 2201488 PQF060|FTMM Parcel 51 Waters

Lab ID: **2201488003**

Date Collected: 1/10/2017 16:30

Matrix: Water

Sample ID: **PAR-51-EB-01102017**

Date Received: 1/11/2017 21:10

Parameters	Results	Flag	Units	LOQ	LOD	DL	Method	Prepared By	Analyzed	By	Cntr
Library Search - SemiVolatiles											
Cyclohexene	17.2	J N	ug/L				SW846 8270D	1/13/17 PDK	1/17/17 17:59	CGS	B
Unknown	6.2	J	ug/L				SW846 8270D	1/13/17 PDK	1/17/17 17:59	CGS	B



Mrs. Vanessa N Badman

Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2201488 PQF060|FTMM Parcel 51 Waters

Lab ID: **2201488004** Date Collected: 1/11/2017 08:15 Matrix: Water
Sample ID: **PAR-51-545-TMW-01-14.0** Date Received: 1/11/2017 21:10

Parameters	Results	Flag	Units	LOQ	LOD	DL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS											
Acetone	5.7		ug/L	5.0	3.8	1.6	SW846 8260C		1/13/17 04:06	CJG	H
Benzene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:06	CJG	H
Bromobenzene	0.75U	U	ug/L	1.0	0.75	0.20	SW846 8260C		1/13/17 04:06	CJG	H
Bromochloromethane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:06	CJG	H
Bromodichloromethane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:06	CJG	H
Bromoform	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:06	CJG	H
Bromomethane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:06	CJG	H
2-Butanone	3.8U	U	ug/L	5.0	3.8	1.6	SW846 8260C		1/13/17 04:06	CJG	H
tert-Butyl Alcohol	12.5U	U	ug/L	25.0	12.5	8.3	SW846 8260C		1/13/17 04:06	CJG	H
n-Butylbenzene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:06	CJG	H
tert-Butylbenzene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:06	CJG	H
sec-Butylbenzene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:06	CJG	H
Carbon Tetrachloride	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:06	CJG	H
Chlorobenzene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:06	CJG	H
Chlorodibromomethane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:06	CJG	H
Chloroethane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:06	CJG	H
Chloroform	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:06	CJG	H
Chloromethane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:06	CJG	H
o-Chlorotoluene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:06	CJG	H
p-Chlorotoluene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:06	CJG	H
1,2-Dibromo-3-chloropropane	2.5U	U	ug/L	5.0	2.5	1.6	SW846 8260C		1/13/17 04:06	CJG	H
1,2-Dibromoethane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:06	CJG	H
1,2-Dichlorobenzene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:06	CJG	H
1,3-Dichlorobenzene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:06	CJG	H
1,4-Dichlorobenzene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:06	CJG	H
Dichlorodifluoromethane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:06	CJG	H
1,1-Dichloroethane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:06	CJG	H
1,2-Dichloroethane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:06	CJG	H
1,1-Dichloroethene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:06	CJG	H
cis-1,2-Dichloroethene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:06	CJG	H
trans-1,2-Dichloroethene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:06	CJG	H
1,3-Dichloropropane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:06	CJG	H
2,2-Dichloropropane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:06	CJG	H
1,2-Dichloropropane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:06	CJG	H
1,1-Dichloropropene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:06	CJG	H
cis-1,3-Dichloropropene	0.75U	U26	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:06	CJG	H

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ANALYTICAL RESULTS

Workorder: 2201488 PQF060|FTMM Parcel 51 Waters

Lab ID: **2201488004**
Sample ID: **PAR-51-545-TMW-01-14.0**

Date Collected: 1/11/2017 08:15 Matrix: Water
Date Received: 1/11/2017 21:10

Parameters	Results	Flag	Units	LOQ	LOD	DL	Method	Prepared By	Analyzed	By	Cntr
trans-1,3-Dichloropropene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:06	CJG	H
Ethylbenzene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:06	CJG	H
Hexachlorobutadiene	0.75U	U	ug/L	1.0	0.75	0.43	SW846 8260C		1/13/17 04:06	CJG	H
2-Hexanone	3.8U	U	ug/L	5.0	3.8	1.6	SW846 8260C		1/13/17 04:06	CJG	H
Isopropylbenzene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:06	CJG	H
p-Isopropyltoluene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:06	CJG	H
Methyl t-Butyl Ether	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:06	CJG	H
4-Methyl-2-Pentanone(MIBK)	3.8U	U	ug/L	5.0	3.8	1.6	SW846 8260C		1/13/17 04:06	CJG	H
Methylene Chloride	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:06	CJG	H
Naphthalene	0.75U	U27	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:06	CJG	H
n-Propylbenzene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:06	CJG	H
Styrene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:06	CJG	H
1,1,1,2-Tetrachloroethane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:06	CJG	H
1,1,2,2-Tetrachloroethane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:06	CJG	H
Tetrachloroethene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:06	CJG	H
Toluene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:06	CJG	H
Total Xylenes	2.3U	U	ug/L	3.0	2.3	1.0	SW846 8260C		1/13/17 04:06	CJG	H
1,2,3-Trichlorobenzene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:06	CJG	H
1,2,4-Trichlorobenzene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:06	CJG	H
1,1,1-Trichloroethane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:06	CJG	H
1,1,2-Trichloroethane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:06	CJG	H
Trichloroethene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:06	CJG	H
Trichlorofluoromethane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:06	CJG	H
1,2,3-Trichloropropane	2.5U	U	ug/L	5.0	2.5	1.6	SW846 8260C		1/13/17 04:06	CJG	H
1,2,4-Trimethylbenzene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:06	CJG	H
1,3,5-Trimethylbenzene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:06	CJG	H
Vinyl Chloride	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:06	CJG	H
o-Xylene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:06	CJG	H
mp-Xylene	1.5U	U	ug/L	2.0	1.5	0.66	SW846 8260C		1/13/17 04:06	CJG	H
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>			<i>Method</i>	<i>Prepared By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	107		%	81 - 118			SW846 8260C		1/13/17 04:06	CJG	H
4-Bromofluorobenzene (S)	106		%	85 - 114			SW846 8260C		1/13/17 04:06	CJG	H
Dibromofluoromethane (S)	91.5		%	80 - 119			SW846 8260C		1/13/17 04:06	CJG	H
Toluene-d8 (S)	98.6		%	89 - 112			SW846 8260C		1/13/17 04:06	CJG	H
LIBRARY SEARCH - VOLATILES											
No TIC's Detected	.						Lib Search VOC		1/13/17 04:06	CPK	H

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ANALYTICAL RESULTS

Workorder: 2201488 PQF060|FTMM Parcel 51 Waters

Lab ID: **2201488004** Date Collected: 1/11/2017 08:15 Matrix: Water
Sample ID: **PAR-51-545-TMW-01-14.0** Date Received: 1/11/2017 21:10

Parameters	Results	Flag	Units	LOQ	LOD	DL	Method	Prepared By	Analyzed	By	Cntr
SEMIVOLATILES											
Acenaphthene	3.3U	U	ug/L	6.7	3.3	0.50	SW846 8270D	1/13/17 PDK	1/17/17 18:24	CGS	B
Acenaphthylene	0.64J	J	ug/L	6.7	3.3	0.63	SW846 8270D	1/13/17 PDK	1/17/17 18:24	CGS	B
Anthracene	3.3U	U10	ug/L	6.7	3.3	0.50	SW846 8270D	1/13/17 PDK	1/17/17 18:24	CGS	B
Benzidine	100U	U13 141 5	ug/L	100	100	10.3	SW846 8270D	1/13/17 PDK	1/17/17 18:24	CGS	B
Benzo(a)anthracene	0.91J	J21	ug/L	6.7	3.3	0.43	SW846 8270D	1/13/17 PDK	1/17/17 18:24	CGS	B
Benzo(a)pyrene	0.83J	J24	ug/L	6.7	3.3	0.73	SW846 8270D	1/13/17 PDK	1/17/17 18:24	CGS	B
Benzo(b)fluoranthene	0.98J	J	ug/L	6.7	3.3	0.37	SW846 8270D	1/13/17 PDK	1/17/17 18:24	CGS	B
Benzo(g,h,i)perylene	3.3U	U	ug/L	6.7	3.3	0.73	SW846 8270D	1/13/17 PDK	1/17/17 18:24	CGS	B
Benzo(k)fluoranthene	3.3U	U23	ug/L	6.7	3.3	0.63	SW846 8270D	1/13/17 PDK	1/17/17 18:24	CGS	B
Benzyl Alcohol	6.7U	U	ug/L	26.7	6.7	0.77	SW846 8270D	1/13/17 PDK	1/17/17 18:24	CGS	B
4-Bromophenyl-phenylether	3.3U	U7	ug/L	26.7	3.3	0.57	SW846 8270D	1/13/17 PDK	1/17/17 18:24	CGS	B
Butylbenzylphthalate	0.82J	J17	ug/L	26.7	3.3	0.37	SW846 8270D	1/13/17 PDK	1/17/17 18:24	CGS	B
Carbazole	3.3U	U	ug/L	26.7	3.3	0.40	SW846 8270D	1/13/17 PDK	1/17/17 18:24	CGS	B
4-Chloro-3-methylphenol	3.3U	U	ug/L	26.7	3.3	0.63	SW846 8270D	1/13/17 PDK	1/17/17 18:24	CGS	B
4-Chloroaniline	3.3U	U12	ug/L	26.7	3.3	0.70	SW846 8270D	1/13/17 PDK	1/17/17 18:24	CGS	B
bis(2-Chloroethoxy)methane	3.3U	U	ug/L	26.7	3.3	0.70	SW846 8270D	1/13/17 PDK	1/17/17 18:24	CGS	B
bis(2-Chloroethyl)ether	3.3U	U	ug/L	26.7	3.3	0.57	SW846 8270D	1/13/17 PDK	1/17/17 18:24	CGS	B
bis(2-Chloroisopropyl)ether	3.3U	U	ug/L	26.7	3.3	0.93	SW846 8270D	1/13/17 PDK	1/17/17 18:24	CGS	B
2-Chloronaphthalene	3.3U	U	ug/L	26.7	3.3	0.60	SW846 8270D	1/13/17 PDK	1/17/17 18:24	CGS	B
2-Chlorophenol	6.7U	U	ug/L	26.7	6.7	1.1	SW846 8270D	1/13/17 PDK	1/17/17 18:24	CGS	B
4-Chlorophenyl-phenylether	3.3U	U6	ug/L	26.7	3.3	0.47	SW846 8270D	1/13/17 PDK	1/17/17 18:24	CGS	B
Chrysene	0.60J	J22	ug/L	6.7	3.3	0.40	SW846 8270D	1/13/17 PDK	1/17/17 18:24	CGS	B
mp-Cresol	3.3U	U	ug/L	26.7	3.3	0.50	SW846 8270D	1/13/17 PDK	1/17/17 18:24	CGS	B
o-Cresol	3.3U	U	ug/L	26.7	3.3	0.83	SW846 8270D	1/13/17 PDK	1/17/17 18:24	CGS	B
Di-n-Butylphthalate	1.7J	J11	ug/L	26.7	3.3	0.47	SW846 8270D	1/13/17 PDK	1/17/17 18:24	CGS	B
Di-n-Octylphthalate	3.3U	U	ug/L	26.7	3.3	0.33	SW846 8270D	1/13/17 PDK	1/17/17 18:24	CGS	B
Dibenzo(a,h)anthracene	3.3U	U	ug/L	6.7	3.3	0.70	SW846 8270D	1/13/17 PDK	1/17/17 18:24	CGS	B
Dibenzofuran	3.3U	U	ug/L	26.7	3.3	0.37	SW846 8270D	1/13/17 PDK	1/17/17 18:24	CGS	B
1,2-Dichlorobenzene	3.3U	U	ug/L	26.7	3.3	0.67	SW846 8270D	1/13/17 PDK	1/17/17 18:24	CGS	B
1,3-Dichlorobenzene	3.3U	U	ug/L	26.7	3.3	0.57	SW846 8270D	1/13/17 PDK	1/17/17 18:24	CGS	B
1,4-Dichlorobenzene	3.3U	U	ug/L	26.7	3.3	0.60	SW846 8270D	1/13/17 PDK	1/17/17 18:24	CGS	B
3,3-Dichlorobenzidine	10U	U18 192 0	ug/L	53.3	10	1.6	SW846 8270D	1/13/17 PDK	1/17/17 18:24	CGS	B
2,4-Dichlorophenol	3.3U	U	ug/L	26.7	3.3	1.1	SW846 8270D	1/13/17 PDK	1/17/17 18:24	CGS	B
Diethylphthalate	0.80J	J	ug/L	26.7	3.3	0.60	SW846 8270D	1/13/17 PDK	1/17/17 18:24	CGS	B

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ANALYTICAL RESULTS

Workorder: 2201488 PQF060|FTMM Parcel 51 Waters

Lab ID: **2201488004**
Sample ID: **PAR-51-545-TMW-01-14.0**

Date Collected: 1/11/2017 08:15 Matrix: Water
Date Received: 1/11/2017 21:10

Parameters	Results	Flag	Units	LOQ	LOD	DL	Method	Prepared By	Analyzed	By	Cntr
2,4-Dimethylphenol	16.7U	U	ug/L	26.7	16.7	0.70	SW846 8270D	1/13/17 PDK	1/17/17 18:24	CGS	B
Dimethylphthalate	0.71J	J	ug/L	26.7	3.3	0.47	SW846 8270D	1/13/17 PDK	1/17/17 18:24	CGS	B
2,4-Dinitrophenol	26.7U	U	ug/L	53.3	26.7	6.0	SW846 8270D	1/13/17 PDK	1/17/17 18:24	CGS	B
2,4-Dinitrotoluene	3.3U	U	ug/L	26.7	3.3	0.40	SW846 8270D	1/13/17 PDK	1/17/17 18:24	CGS	B
2,6-Dinitrotoluene	3.3U	U	ug/L	26.7	3.3	0.70	SW846 8270D	1/13/17 PDK	1/17/17 18:24	CGS	B
1,2-Diphenylhydrazine	3.3U	U	ug/L	26.7	3.3	0.87	SW846 8270D	1/13/17 PDK	1/17/17 18:24	CGS	B
bis(2-Ethylhexyl)phthalate	3.2J	J	ug/L	26.7	3.3	0.73	SW846 8270D	1/13/17 PDK	1/17/17 18:24	CGS	B
Fluoranthene	1.1J	J12	ug/L	6.7	3.3	0.57	SW846 8270D	1/13/17 PDK	1/17/17 18:24	CGS	B
Fluorene	3.3U	U	ug/L	6.7	3.3	0.67	SW846 8270D	1/13/17 PDK	1/17/17 18:24	CGS	B
Hexachlorobenzene	3.3U	U8	ug/L	26.7	3.3	0.77	SW846 8270D	1/13/17 PDK	1/17/17 18:24	CGS	B
Hexachlorobutadiene	3.3U	U	ug/L	26.7	3.3	0.63	SW846 8270D	1/13/17 PDK	1/17/17 18:24	CGS	B
Hexachlorocyclopentadiene	6.7U	U34 5	ug/L	26.7	6.7	0.57	SW846 8270D	1/13/17 PDK	1/17/17 18:24	CGS	B
Hexachloroethane	3.3U	U	ug/L	26.7	3.3	1.0	SW846 8270D	1/13/17 PDK	1/17/17 18:24	CGS	B
Indeno(1,2,3-cd)pyrene	0.65J	J	ug/L	6.7	3.3	0.33	SW846 8270D	1/13/17 PDK	1/17/17 18:24	CGS	B
Isophorone	3.3U	U	ug/L	26.7	3.3	0.50	SW846 8270D	1/13/17 PDK	1/17/17 18:24	CGS	B
2-Methyl-4,6-dinitrophenol	16.7U	U	ug/L	26.7	16.7	1.1	SW846 8270D	1/13/17 PDK	1/17/17 18:24	CGS	B
2-Methylnaphthalene	3.3U	U	ug/L	6.7	3.3	0.53	SW846 8270D	1/13/17 PDK	1/17/17 18:24	CGS	B
Naphthalene	3.3U	U	ug/L	6.7	3.3	0.40	SW846 8270D	1/13/17 PDK	1/17/17 18:24	CGS	B
2-Nitroaniline	3.3U	U	ug/L	26.7	3.3	0.67	SW846 8270D	1/13/17 PDK	1/17/17 18:24	CGS	B
3-Nitroaniline	6.7U	U	ug/L	26.7	6.7	0.60	SW846 8270D	1/13/17 PDK	1/17/17 18:24	CGS	B
4-Nitroaniline	3.3U	U	ug/L	26.7	3.3	1.4	SW846 8270D	1/13/17 PDK	1/17/17 18:24	CGS	B
Nitrobenzene	6.7U	U	ug/L	26.7	6.7	0.93	SW846 8270D	1/13/17 PDK	1/17/17 18:24	CGS	B
2-Nitrophenol	6.7U	U	ug/L	26.7	6.7	1.5	SW846 8270D	1/13/17 PDK	1/17/17 18:24	CGS	B
4-Nitrophenol	16.7U	U	ug/L	26.7	16.7	3.5	SW846 8270D	1/13/17 PDK	1/17/17 18:24	CGS	B
N-Nitrosodimethylamine	6.7U	U	ug/L	26.7	6.7	2.1	SW846 8270D	1/13/17 PDK	1/17/17 18:24	CGS	B
N-Nitroso-di-n-propylamine	3.3U	U	ug/L	26.7	3.3	0.80	SW846 8270D	1/13/17 PDK	1/17/17 18:24	CGS	B
N-Nitrosodiphenylamine	6.7U	U	ug/L	26.7	6.7	0.60	SW846 8270D	1/13/17 PDK	1/17/17 18:24	CGS	B
Pentachlorophenol	26.7U	U	ug/L	53.3	26.7	3.6	SW846 8270D	1/13/17 PDK	1/17/17 18:24	CGS	B
Phenanthrene	0.89J	J9	ug/L	6.7	3.3	0.43	SW846 8270D	1/13/17 PDK	1/17/17 18:24	CGS	B
Phenol	3.3U	U	ug/L	26.7	3.3	0.77	SW846 8270D	1/13/17 PDK	1/17/17 18:24	CGS	B
Pyrene	1.2J	J16	ug/L	6.7	3.3	0.53	SW846 8270D	1/13/17 PDK	1/17/17 18:24	CGS	B
1,2,4-Trichlorobenzene	3.3U	U	ug/L	26.7	3.3	0.43	SW846 8270D	1/13/17 PDK	1/17/17 18:24	CGS	B
2,4,5-Trichlorophenol	10U	U	ug/L	26.7	10	1.8	SW846 8270D	1/13/17 PDK	1/17/17 18:24	CGS	B
2,4,6-Trichlorophenol	3.3U	U	ug/L	26.7	3.3	1.9	SW846 8270D	1/13/17 PDK	1/17/17 18:24	CGS	B
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>			<i>Method</i>	<i>Prepared By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
2,4,6-Tribromophenol (S)	75.5		%	43 - 140			SW846 8270D	1/13/17 PDK	1/17/17 18:24	CGS	B
2-Fluorobiphenyl (S)	62.8		%	44 - 119			SW846 8270D	1/13/17 PDK	1/17/17 18:24	CGS	B

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ANALYTICAL RESULTS

Workorder: 2201488 PQF060|FTMM Parcel 51 Waters

Lab ID: **2201488004**

Date Collected: 1/11/2017 08:15

Matrix: Water

Sample ID: **PAR-51-545-TMW-01-14.0**

Date Received: 1/11/2017 21:10

Parameters	Results	Flag	Units	LOQ	LOD	DL	Method	Prepared By	Analyzed	By	Cntr
2-Fluorophenol (S)	41.7		%	19 - 119			SW846 8270D	1/13/17 PDK	1/17/17 18:24	CGS	B
Nitrobenzene-d5 (S)	63.3		%	44 - 120			SW846 8270D	1/13/17 PDK	1/17/17 18:24	CGS	B
Phenol-d5 (S)	27		%	13 - 49			SW846 8270D	1/13/17 PDK	1/17/17 18:24	CGS	B
Terphenyl-d14 (S)	35.1	25	%	50 - 134			SW846 8270D	1/13/17 PDK	1/17/17 18:24	CGS	B
Library Search - SemiVolatiles											
Cyclohexene	50.7	J N	ug/L				SW846 8270D	1/13/17 PDK	1/17/17 18:24	CGS	B
Octanoic Acid	16.8	J N	ug/L				SW846 8270D	1/13/17 PDK	1/17/17 18:24	CGS	B
Glycine, N-methyl-N-(1-oxodode	21.4	J N	ug/L				SW846 8270D	1/13/17 PDK	1/17/17 18:24	CGS	B
Oleic Acid	19.4	J N	ug/L				SW846 8270D	1/13/17 PDK	1/17/17 18:24	CGS	B
Octadecanoic acid	46.6	J N	ug/L				SW846 8270D	1/13/17 PDK	1/17/17 18:24	CGS	B
Phenol, 4,4'-butylidenebis[2-(	80.6	J N	ug/L				SW846 8270D	1/13/17 PDK	1/17/17 18:24	CGS	B
Unknown	44.9	J	ug/L				SW846 8270D	1/13/17 PDK	1/17/17 18:24	CGS	B
Unknown	58.5	J	ug/L				SW846 8270D	1/13/17 PDK	1/17/17 18:24	CGS	B



Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2201488 PQF060|FTMM Parcel 51 Waters

Lab ID: **2201488005** Date Collected: 1/11/2017 11:00 Matrix: Water
Sample ID: **PAR-51-EB-01112017** Date Received: 1/11/2017 21:10

Parameters	Results	Flag	Units	LOQ	LOD	DL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS											
Acetone	3.8U	U	ug/L	5.0	3.8	1.6	SW846 8260C		1/13/17 03:00	CJG	D
Benzene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:00	CJG	D
Bromobenzene	0.75U	U	ug/L	1.0	0.75	0.20	SW846 8260C		1/13/17 03:00	CJG	D
Bromochloromethane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:00	CJG	D
Bromodichloromethane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:00	CJG	D
Bromoform	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:00	CJG	D
Bromomethane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:00	CJG	D
2-Butanone	3.8U	U	ug/L	5.0	3.8	1.6	SW846 8260C		1/13/17 03:00	CJG	D
tert-Butyl Alcohol	12.5U	U	ug/L	25.0	12.5	8.3	SW846 8260C		1/13/17 03:00	CJG	D
n-Butylbenzene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:00	CJG	D
tert-Butylbenzene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:00	CJG	D
sec-Butylbenzene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:00	CJG	D
Carbon Tetrachloride	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:00	CJG	D
Chlorobenzene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:00	CJG	D
Chlorodibromomethane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:00	CJG	D
Chloroethane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:00	CJG	D
Chloroform	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:00	CJG	D
Chloromethane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:00	CJG	D
o-Chlorotoluene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:00	CJG	D
p-Chlorotoluene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:00	CJG	D
1,2-Dibromo-3-chloropropane	2.5U	U	ug/L	5.0	2.5	1.6	SW846 8260C		1/13/17 03:00	CJG	D
1,2-Dibromoethane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:00	CJG	D
1,2-Dichlorobenzene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:00	CJG	D
1,3-Dichlorobenzene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:00	CJG	D
1,4-Dichlorobenzene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:00	CJG	D
Dichlorodifluoromethane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:00	CJG	D
1,1-Dichloroethane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:00	CJG	D
1,2-Dichloroethane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:00	CJG	D
1,1-Dichloroethene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:00	CJG	D
cis-1,2-Dichloroethene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:00	CJG	D
trans-1,2-Dichloroethene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:00	CJG	D
1,3-Dichloropropane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:00	CJG	D
2,2-Dichloropropane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:00	CJG	D
1,2-Dichloropropane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:00	CJG	D
1,1-Dichloropropene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:00	CJG	D
cis-1,3-Dichloropropene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:00	CJG	D

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ANALYTICAL RESULTS

Workorder: 2201488 PQF060|FTMM Parcel 51 Waters

Lab ID: **2201488005**

Date Collected: 1/11/2017 11:00

Matrix: Water

Sample ID: **PAR-51-EB-01112017**

Date Received: 1/11/2017 21:10

Parameters	Results	Flag	Units	LOQ	LOD	DL	Method	Prepared By	Analyzed	By	Cntr
trans-1,3-Dichloropropene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:00	CJG	D
Ethylbenzene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:00	CJG	D
Hexachlorobutadiene	0.75U	U	ug/L	1.0	0.75	0.43	SW846 8260C		1/13/17 03:00	CJG	D
2-Hexanone	3.8U	U	ug/L	5.0	3.8	1.6	SW846 8260C		1/13/17 03:00	CJG	D
Isopropylbenzene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:00	CJG	D
p-Isopropyltoluene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:00	CJG	D
Methyl t-Butyl Ether	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:00	CJG	D
4-Methyl-2-Pentanone(MIBK)	3.8U	U	ug/L	5.0	3.8	1.6	SW846 8260C		1/13/17 03:00	CJG	D
Methylene Chloride	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:00	CJG	D
Naphthalene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:00	CJG	D
n-Propylbenzene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:00	CJG	D
Styrene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:00	CJG	D
1,1,1,2-Tetrachloroethane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:00	CJG	D
1,1,2,2-Tetrachloroethane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:00	CJG	D
Tetrachloroethene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:00	CJG	D
Toluene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:00	CJG	D
Total Xylenes	2.3U	U	ug/L	3.0	2.3	1.0	SW846 8260C		1/13/17 03:00	CJG	D
1,2,3-Trichlorobenzene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:00	CJG	D
1,2,4-Trichlorobenzene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:00	CJG	D
1,1,1-Trichloroethane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:00	CJG	D
1,1,2-Trichloroethane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:00	CJG	D
Trichloroethene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:00	CJG	D
Trichlorofluoromethane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:00	CJG	D
1,2,3-Trichloropropane	2.5U	U	ug/L	5.0	2.5	1.6	SW846 8260C		1/13/17 03:00	CJG	D
1,2,4-Trimethylbenzene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:00	CJG	D
1,3,5-Trimethylbenzene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:00	CJG	D
Vinyl Chloride	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:00	CJG	D
o-Xylene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:00	CJG	D
mp-Xylene	1.5U	U	ug/L	2.0	1.5	0.66	SW846 8260C		1/13/17 03:00	CJG	D
Surrogate Recoveries	Results	Flag	Units	Limits			Method	Prepared By	Analyzed	By	Cntr
1,2-Dichloroethane-d4 (S)	106		%	81 - 118			SW846 8260C		1/13/17 03:00	CJG	D
4-Bromofluorobenzene (S)	105		%	85 - 114			SW846 8260C		1/13/17 03:00	CJG	D
Dibromofluoromethane (S)	89.6		%	80 - 119			SW846 8260C		1/13/17 03:00	CJG	D
Toluene-d8 (S)	95.7		%	89 - 112			SW846 8260C		1/13/17 03:00	CJG	D

LIBRARY SEARCH - VOLATILES

No TIC's Detected

Lib Search VOC

1/13/17 03:00 CPK D

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ANALYTICAL RESULTS

Workorder: 2201488 PQF060|FTMM Parcel 51 Waters

Lab ID: **2201488005**

Date Collected: 1/11/2017 11:00

Matrix: Water

Sample ID: **PAR-51-EB-01112017**

Date Received: 1/11/2017 21:10

Parameters	Results	Flag	Units	LOQ	LOD	DL	Method	Prepared By	Analyzed	By	Cntr
SEMIVOLATILES											
Acenaphthene	1.1U	U	ug/L	2.2	1.1	0.16	SW846 8270D	1/13/17 PDK	1/17/17 19:38	CGS	B
Acenaphthylene	1.1U	U	ug/L	2.2	1.1	0.20	SW846 8270D	1/13/17 PDK	1/17/17 19:38	CGS	B
Anthracene	1.1U	U	ug/L	2.2	1.1	0.16	SW846 8270D	1/13/17 PDK	1/17/17 19:38	CGS	B
Benidine	32.3U	U1	ug/L	32.3	32.3	3.3	SW846 8270D	1/13/17 PDK	1/17/17 19:38	CGS	B
Benzo(a)anthracene	1.1U	U	ug/L	2.2	1.1	0.14	SW846 8270D	1/13/17 PDK	1/17/17 19:38	CGS	B
Benzo(a)pyrene	1.1U	U	ug/L	2.2	1.1	0.24	SW846 8270D	1/13/17 PDK	1/17/17 19:38	CGS	B
Benzo(b)fluoranthene	1.1U	U	ug/L	2.2	1.1	0.12	SW846 8270D	1/13/17 PDK	1/17/17 19:38	CGS	B
Benzo(g,h,i)perylene	1.1U	U	ug/L	2.2	1.1	0.24	SW846 8270D	1/13/17 PDK	1/17/17 19:38	CGS	B
Benzo(k)fluoranthene	1.1U	U	ug/L	2.2	1.1	0.20	SW846 8270D	1/13/17 PDK	1/17/17 19:38	CGS	B
Benzyl Alcohol	2.2U	U	ug/L	8.6	2.2	0.25	SW846 8270D	1/13/17 PDK	1/17/17 19:38	CGS	B
4-Bromophenyl-phenylether	1.1U	U	ug/L	8.6	1.1	0.18	SW846 8270D	1/13/17 PDK	1/17/17 19:38	CGS	B
Butylbenzylphthalate	0.22J	J	ug/L	8.6	1.1	0.12	SW846 8270D	1/13/17 PDK	1/17/17 19:38	CGS	B
Carbazole	1.1U	U	ug/L	8.6	1.1	0.13	SW846 8270D	1/13/17 PDK	1/17/17 19:38	CGS	B
4-Chloro-3-methylphenol	1.1U	U	ug/L	8.6	1.1	0.20	SW846 8270D	1/13/17 PDK	1/17/17 19:38	CGS	B
4-Chloroaniline	1.1U	U	ug/L	8.6	1.1	0.23	SW846 8270D	1/13/17 PDK	1/17/17 19:38	CGS	B
bis(2-Chloroethoxy)methane	1.1U	U	ug/L	8.6	1.1	0.23	SW846 8270D	1/13/17 PDK	1/17/17 19:38	CGS	B
bis(2-Chloroethyl)ether	1.1U	U	ug/L	8.6	1.1	0.18	SW846 8270D	1/13/17 PDK	1/17/17 19:38	CGS	B
bis(2-Chloroisopropyl)ether	1.1U	U	ug/L	8.6	1.1	0.30	SW846 8270D	1/13/17 PDK	1/17/17 19:38	CGS	B
2-Chloronaphthalene	1.1U	U	ug/L	8.6	1.1	0.19	SW846 8270D	1/13/17 PDK	1/17/17 19:38	CGS	B
2-Chlorophenol	2.2U	U	ug/L	8.6	2.2	0.35	SW846 8270D	1/13/17 PDK	1/17/17 19:38	CGS	B
4-Chlorophenyl-phenylether	1.1U	U	ug/L	8.6	1.1	0.15	SW846 8270D	1/13/17 PDK	1/17/17 19:38	CGS	B
Chrysene	1.1U	U	ug/L	2.2	1.1	0.13	SW846 8270D	1/13/17 PDK	1/17/17 19:38	CGS	B
mp-Cresol	1.1U	U	ug/L	8.6	1.1	0.16	SW846 8270D	1/13/17 PDK	1/17/17 19:38	CGS	B
o-Cresol	1.1U	U	ug/L	8.6	1.1	0.27	SW846 8270D	1/13/17 PDK	1/17/17 19:38	CGS	B
Di-n-Butylphthalate	1.1U	U	ug/L	8.6	1.1	0.15	SW846 8270D	1/13/17 PDK	1/17/17 19:38	CGS	B
Di-n-Octylphthalate	1.1U	U	ug/L	8.6	1.1	0.11	SW846 8270D	1/13/17 PDK	1/17/17 19:38	CGS	B
Dibenzo(a,h)anthracene	1.1U	U	ug/L	2.2	1.1	0.23	SW846 8270D	1/13/17 PDK	1/17/17 19:38	CGS	B
Dibenzofuran	1.1U	U	ug/L	8.6	1.1	0.12	SW846 8270D	1/13/17 PDK	1/17/17 19:38	CGS	B
1,2-Dichlorobenzene	1.1U	U	ug/L	8.6	1.1	0.22	SW846 8270D	1/13/17 PDK	1/17/17 19:38	CGS	B
1,3-Dichlorobenzene	1.1U	U	ug/L	8.6	1.1	0.18	SW846 8270D	1/13/17 PDK	1/17/17 19:38	CGS	B
1,4-Dichlorobenzene	1.1U	U	ug/L	8.6	1.1	0.19	SW846 8270D	1/13/17 PDK	1/17/17 19:38	CGS	B
3,3-Dichlorobenzidine	3.2U	U	ug/L	17.2	3.2	0.52	SW846 8270D	1/13/17 PDK	1/17/17 19:38	CGS	B
2,4-Dichlorophenol	1.1U	U	ug/L	8.6	1.1	0.34	SW846 8270D	1/13/17 PDK	1/17/17 19:38	CGS	B
Diethylphthalate	1.1U	U	ug/L	8.6	1.1	0.19	SW846 8270D	1/13/17 PDK	1/17/17 19:38	CGS	B
2,4-Dimethylphenol	5.4U	U	ug/L	8.6	5.4	0.23	SW846 8270D	1/13/17 PDK	1/17/17 19:38	CGS	B
Dimethylphthalate	1.1U	U	ug/L	8.6	1.1	0.15	SW846 8270D	1/13/17 PDK	1/17/17 19:38	CGS	B
2,4-Dinitrophenol	8.6U	U	ug/L	17.2	8.6	1.9	SW846 8270D	1/13/17 PDK	1/17/17 19:38	CGS	B

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ANALYTICAL RESULTS

Workorder: 2201488 PQF060|FTMM Parcel 51 Waters

Lab ID: **2201488005**

Date Collected: 1/11/2017 11:00

Matrix: Water

Sample ID: **PAR-51-EB-01112017**

Date Received: 1/11/2017 21:10

Parameters	Results	Flag	Units	LOQ	LOD	DL	Method	Prepared By	Analyzed	By	Cntr
2,4-Dinitrotoluene	1.1U	U	ug/L	8.6	1.1	0.13	SW846 8270D	1/13/17 PDK	1/17/17 19:38	CGS	B
2,6-Dinitrotoluene	1.1U	U	ug/L	8.6	1.1	0.23	SW846 8270D	1/13/17 PDK	1/17/17 19:38	CGS	B
1,2-Diphenylhydrazine	1.1U	U	ug/L	8.6	1.1	0.28	SW846 8270D	1/13/17 PDK	1/17/17 19:38	CGS	B
bis(2-Ethylhexyl)phthalate	1.1U	U	ug/L	8.6	1.1	0.24	SW846 8270D	1/13/17 PDK	1/17/17 19:38	CGS	B
Fluoranthene	1.1U	U	ug/L	2.2	1.1	0.18	SW846 8270D	1/13/17 PDK	1/17/17 19:38	CGS	B
Fluorene	1.1U	U	ug/L	2.2	1.1	0.22	SW846 8270D	1/13/17 PDK	1/17/17 19:38	CGS	B
Hexachlorobenzene	1.1U	U	ug/L	8.6	1.1	0.25	SW846 8270D	1/13/17 PDK	1/17/17 19:38	CGS	B
Hexachlorobutadiene	1.1U	U	ug/L	8.6	1.1	0.20	SW846 8270D	1/13/17 PDK	1/17/17 19:38	CGS	B
Hexachlorocyclopentadiene	2.2U	U	ug/L	8.6	2.2	0.18	SW846 8270D	1/13/17 PDK	1/17/17 19:38	CGS	B
Hexachloroethane	1.1U	U	ug/L	8.6	1.1	0.32	SW846 8270D	1/13/17 PDK	1/17/17 19:38	CGS	B
Indeno(1,2,3-cd)pyrene	1.1U	U	ug/L	2.2	1.1	0.11	SW846 8270D	1/13/17 PDK	1/17/17 19:38	CGS	B
Isophorone	1.1U	U	ug/L	8.6	1.1	0.16	SW846 8270D	1/13/17 PDK	1/17/17 19:38	CGS	B
2-Methyl-4,6-dinitrophenol	5.4U	U	ug/L	8.6	5.4	0.35	SW846 8270D	1/13/17 PDK	1/17/17 19:38	CGS	B
2-Methylnaphthalene	1.1U	U	ug/L	2.2	1.1	0.17	SW846 8270D	1/13/17 PDK	1/17/17 19:38	CGS	B
Naphthalene	1.1U	U	ug/L	2.2	1.1	0.13	SW846 8270D	1/13/17 PDK	1/17/17 19:38	CGS	B
2-Nitroaniline	1.1U	U	ug/L	8.6	1.1	0.22	SW846 8270D	1/13/17 PDK	1/17/17 19:38	CGS	B
3-Nitroaniline	2.2U	U	ug/L	8.6	2.2	0.19	SW846 8270D	1/13/17 PDK	1/17/17 19:38	CGS	B
4-Nitroaniline	1.1U	U	ug/L	8.6	1.1	0.44	SW846 8270D	1/13/17 PDK	1/17/17 19:38	CGS	B
Nitrobenzene	2.2U	U	ug/L	8.6	2.2	0.30	SW846 8270D	1/13/17 PDK	1/17/17 19:38	CGS	B
2-Nitrophenol	2.2U	U	ug/L	8.6	2.2	0.48	SW846 8270D	1/13/17 PDK	1/17/17 19:38	CGS	B
4-Nitrophenol	5.4U	U	ug/L	8.6	5.4	1.1	SW846 8270D	1/13/17 PDK	1/17/17 19:38	CGS	B
N-Nitrosodimethylamine	2.2U	U	ug/L	8.6	2.2	0.69	SW846 8270D	1/13/17 PDK	1/17/17 19:38	CGS	B
N-Nitroso-di-n-propylamine	1.1U	U	ug/L	8.6	1.1	0.26	SW846 8270D	1/13/17 PDK	1/17/17 19:38	CGS	B
N-Nitrosodiphenylamine	2.2U	U	ug/L	8.6	2.2	0.19	SW846 8270D	1/13/17 PDK	1/17/17 19:38	CGS	B
Pentachlorophenol	8.6U	U	ug/L	17.2	8.6	1.2	SW846 8270D	1/13/17 PDK	1/17/17 19:38	CGS	B
Phenanthrene	1.1U	U	ug/L	2.2	1.1	0.14	SW846 8270D	1/13/17 PDK	1/17/17 19:38	CGS	B
Phenol	1.1U	U	ug/L	8.6	1.1	0.25	SW846 8270D	1/13/17 PDK	1/17/17 19:38	CGS	B
Pyrene	1.1U	U	ug/L	2.2	1.1	0.17	SW846 8270D	1/13/17 PDK	1/17/17 19:38	CGS	B
1,2,4-Trichlorobenzene	1.1U	U	ug/L	8.6	1.1	0.14	SW846 8270D	1/13/17 PDK	1/17/17 19:38	CGS	B
2,4,5-Trichlorophenol	3.2U	U	ug/L	8.6	3.2	0.59	SW846 8270D	1/13/17 PDK	1/17/17 19:38	CGS	B
2,4,6-Trichlorophenol	1.1U	U	ug/L	8.6	1.1	0.61	SW846 8270D	1/13/17 PDK	1/17/17 19:38	CGS	B
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>			<i>Method</i>	<i>Prepared By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
2,4,6-Tribromophenol (S)	80.3		%	43 - 140			SW846 8270D	1/13/17 PDK	1/17/17 19:38	CGS	B
2-Fluorobiphenyl (S)	80		%	44 - 119			SW846 8270D	1/13/17 PDK	1/17/17 19:38	CGS	B
2-Fluorophenol (S)	53.1		%	19 - 119			SW846 8270D	1/13/17 PDK	1/17/17 19:38	CGS	B
Nitrobenzene-d5 (S)	78.8		%	44 - 120			SW846 8270D	1/13/17 PDK	1/17/17 19:38	CGS	B
Phenol-d5 (S)	33		%	13 - 49			SW846 8270D	1/13/17 PDK	1/17/17 19:38	CGS	B
Terphenyl-d14 (S)	81.6		%	50 - 134			SW846 8270D	1/13/17 PDK	1/17/17 19:38	CGS	B

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ANALYTICAL RESULTS

Workorder: 2201488 PQF060|FTMM Parcel 51 Waters

Lab ID: **2201488005** Date Collected: 1/11/2017 11:00 Matrix: Water
Sample ID: **PAR-51-EB-01112017** Date Received: 1/11/2017 21:10

Parameters	Results	Flag	Units	LOQ	LOD	DL	Method	Prepared By	Analyzed	By	Cntr
Library Search - SemiVolatiles											
Cyclohexene	22.4	J N	ug/L				SW846 8270D	1/13/17 PDK	1/17/17 19:38	CGS	B
Unknown	241	J	ug/L				SW846 8270D	1/13/17 PDK	1/17/17 19:38	CGS	B
Unknown	79.5	J	ug/L				SW846 8270D	1/13/17 PDK	1/17/17 19:38	CGS	B
Unknown	196	J	ug/L				SW846 8270D	1/13/17 PDK	1/17/17 19:38	CGS	B
Unknown	42.2	J	ug/L				SW846 8270D	1/13/17 PDK	1/17/17 19:38	CGS	B



Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2201488 PQF060|FTMM Parcel 51 Waters

Lab ID: **2201488006**

Date Collected: 1/11/2017 21:10

Matrix: Water

Sample ID: **PAR-51-TB-01112017**

Date Received: 1/11/2017 21:10

Parameters	Results	Flag	Units	LOQ	LOD	DL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS											
Acetone	3.8U	U	ug/L	5.0	3.8	1.6	SW846 8260C		1/13/17 03:22	CJG	B
Benzene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:22	CJG	B
Bromobenzene	0.75U	U	ug/L	1.0	0.75	0.20	SW846 8260C		1/13/17 03:22	CJG	B
Bromochloromethane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:22	CJG	B
Bromodichloromethane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:22	CJG	B
Bromoform	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:22	CJG	B
Bromomethane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:22	CJG	B
2-Butanone	3.8U	U	ug/L	5.0	3.8	1.6	SW846 8260C		1/13/17 03:22	CJG	B
tert-Butyl Alcohol	12.5U	U	ug/L	25.0	12.5	8.3	SW846 8260C		1/13/17 03:22	CJG	B
n-Butylbenzene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:22	CJG	B
tert-Butylbenzene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:22	CJG	B
sec-Butylbenzene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:22	CJG	B
Carbon Tetrachloride	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:22	CJG	B
Chlorobenzene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:22	CJG	B
Chlorodibromomethane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:22	CJG	B
Chloroethane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:22	CJG	B
Chloroform	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:22	CJG	B
Chloromethane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:22	CJG	B
o-Chlorotoluene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:22	CJG	B
p-Chlorotoluene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:22	CJG	B
1,2-Dibromo-3-chloropropane	2.5U	U	ug/L	5.0	2.5	1.6	SW846 8260C		1/13/17 03:22	CJG	B
1,2-Dibromoethane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:22	CJG	B
1,2-Dichlorobenzene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:22	CJG	B
1,3-Dichlorobenzene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:22	CJG	B
1,4-Dichlorobenzene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:22	CJG	B
Dichlorodifluoromethane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:22	CJG	B
1,1-Dichloroethane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:22	CJG	B
1,2-Dichloroethane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:22	CJG	B
1,1-Dichloroethene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:22	CJG	B
cis-1,2-Dichloroethene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:22	CJG	B
trans-1,2-Dichloroethene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:22	CJG	B
1,3-Dichloropropane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:22	CJG	B
2,2-Dichloropropane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:22	CJG	B
1,2-Dichloropropane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:22	CJG	B
1,1-Dichloropropene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:22	CJG	B
cis-1,3-Dichloropropene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:22	CJG	B

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ANALYTICAL RESULTS

Workorder: 2201488 PQF060|FTMM Parcel 51 Waters

Lab ID: **2201488006**

Date Collected: 1/11/2017 21:10

Matrix: Water

Sample ID: **PAR-51-TB-01112017**

Date Received: 1/11/2017 21:10

Parameters	Results	Flag	Units	LOQ	LOD	DL	Method	Prepared By	Analyzed	By	Cntr
trans-1,3-Dichloropropene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:22	CJG	B
Ethylbenzene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:22	CJG	B
Hexachlorobutadiene	0.75U	U	ug/L	1.0	0.75	0.43	SW846 8260C		1/13/17 03:22	CJG	B
2-Hexanone	3.8U	U	ug/L	5.0	3.8	1.6	SW846 8260C		1/13/17 03:22	CJG	B
Isopropylbenzene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:22	CJG	B
p-Isopropyltoluene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:22	CJG	B
Methyl t-Butyl Ether	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:22	CJG	B
4-Methyl-2-Pentanone(MIBK)	3.8U	U	ug/L	5.0	3.8	1.6	SW846 8260C		1/13/17 03:22	CJG	B
Methylene Chloride	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:22	CJG	B
Naphthalene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:22	CJG	B
n-Propylbenzene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:22	CJG	B
Styrene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:22	CJG	B
1,1,1,2-Tetrachloroethane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:22	CJG	B
1,1,2,2-Tetrachloroethane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:22	CJG	B
Tetrachloroethene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:22	CJG	B
Toluene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:22	CJG	B
Total Xylenes	2.3U	U	ug/L	3.0	2.3	1.0	SW846 8260C		1/13/17 03:22	CJG	B
1,2,3-Trichlorobenzene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:22	CJG	B
1,2,4-Trichlorobenzene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:22	CJG	B
1,1,1-Trichloroethane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:22	CJG	B
1,1,2-Trichloroethane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:22	CJG	B
Trichloroethene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:22	CJG	B
Trichlorofluoromethane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:22	CJG	B
1,2,3-Trichloropropane	2.5U	U	ug/L	5.0	2.5	1.6	SW846 8260C		1/13/17 03:22	CJG	B
1,2,4-Trimethylbenzene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:22	CJG	B
1,3,5-Trimethylbenzene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:22	CJG	B
Vinyl Chloride	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:22	CJG	B
o-Xylene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 03:22	CJG	B
mp-Xylene	1.5U	U	ug/L	2.0	1.5	0.66	SW846 8260C		1/13/17 03:22	CJG	B
Surrogate Recoveries	Results	Flag	Units	Limits			Method	Prepared By	Analyzed	By	Cntr
1,2-Dichloroethane-d4 (S)	108		%	81 - 118			SW846 8260C		1/13/17 03:22	CJG	B
4-Bromofluorobenzene (S)	107		%	85 - 114			SW846 8260C		1/13/17 03:22	CJG	B
Dibromofluoromethane (S)	90.3		%	80 - 119			SW846 8260C		1/13/17 03:22	CJG	B
Toluene-d8 (S)	98.1		%	89 - 112			SW846 8260C		1/13/17 03:22	CJG	B
LIBRARY SEARCH - VOLATILES											
No TIC's Detected	.						Lib Search VOC		1/13/17 03:22	CPK	B

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ALS Environmental



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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2201488 PQF060|FTMM Parcel 51 Waters

Lab ID: **2201488006**

Date Collected: 1/11/2017 21:10

Matrix: Water

Sample ID: **PAR-51-TB-01112017**

Date Received: 1/11/2017 21:10

Parameters	Results	Flag	Units	LOQ	LOD	DL	Method	Prepared By	Analyzed	By	Cntr
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Mrs. Vanessa N Badman

Project Coordinator

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Vancouver Waterloo · Winnipeg · Yellowknife **United States:** Cincinnati · Everett · Fort Collins · Holland · Houston · Middletown · Salt Lake City · Spring City · York **Mexico:** Monterrey

ANALYTICAL RESULTS

Workorder: 2201488 PQF060|FTMM Parcel 51 Waters

Lab ID: **2201488007** Date Collected: 1/11/2017 12:00 Matrix: Water
Sample ID: **PAR-51-545-TMW-101-14.0** Date Received: 1/11/2017 21:10

Parameters	Results	Flag	Units	LOQ	LOD	DL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS											
Acetone	7.3		ug/L	5.0	3.8	1.6	SW846 8260C		1/13/17 04:28	CJG	D
Benzene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:28	CJG	D
Bromobenzene	0.75U	U	ug/L	1.0	0.75	0.20	SW846 8260C		1/13/17 04:28	CJG	D
Bromochloromethane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:28	CJG	D
Bromodichloromethane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:28	CJG	D
Bromoform	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:28	CJG	D
Bromomethane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:28	CJG	D
2-Butanone	3.8U	U	ug/L	5.0	3.8	1.6	SW846 8260C		1/13/17 04:28	CJG	D
tert-Butyl Alcohol	12.5U	U	ug/L	25.0	12.5	8.3	SW846 8260C		1/13/17 04:28	CJG	D
n-Butylbenzene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:28	CJG	D
tert-Butylbenzene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:28	CJG	D
sec-Butylbenzene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:28	CJG	D
Carbon Tetrachloride	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:28	CJG	D
Chlorobenzene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:28	CJG	D
Chlorodibromomethane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:28	CJG	D
Chloroethane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:28	CJG	D
Chloroform	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:28	CJG	D
Chloromethane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:28	CJG	D
o-Chlorotoluene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:28	CJG	D
p-Chlorotoluene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:28	CJG	D
1,2-Dibromo-3-chloropropane	2.5U	U	ug/L	5.0	2.5	1.6	SW846 8260C		1/13/17 04:28	CJG	D
1,2-Dibromoethane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:28	CJG	D
1,2-Dichlorobenzene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:28	CJG	D
1,3-Dichlorobenzene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:28	CJG	D
1,4-Dichlorobenzene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:28	CJG	D
Dichlorodifluoromethane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:28	CJG	D
1,1-Dichloroethane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:28	CJG	D
1,2-Dichloroethane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:28	CJG	D
1,1-Dichloroethene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:28	CJG	D
cis-1,2-Dichloroethene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:28	CJG	D
trans-1,2-Dichloroethene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:28	CJG	D
1,3-Dichloropropane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:28	CJG	D
2,2-Dichloropropane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:28	CJG	D
1,2-Dichloropropane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:28	CJG	D
1,1-Dichloropropene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:28	CJG	D
cis-1,3-Dichloropropene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:28	CJG	D

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ANALYTICAL RESULTS

Workorder: 2201488 PQF060|FTMM Parcel 51 Waters

Lab ID: **2201488007**

Date Collected: 1/11/2017 12:00

Matrix: Water

Sample ID: **PAR-51-545-TMW-101-14.0**

Date Received: 1/11/2017 21:10

Parameters	Results	Flag	Units	LOQ	LOD	DL	Method	Prepared By	Analyzed	By	Cntr
trans-1,3-Dichloropropene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:28	CJG	D
Ethylbenzene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:28	CJG	D
Hexachlorobutadiene	0.75U	U	ug/L	1.0	0.75	0.43	SW846 8260C		1/13/17 04:28	CJG	D
2-Hexanone	3.8U	U	ug/L	5.0	3.8	1.6	SW846 8260C		1/13/17 04:28	CJG	D
Isopropylbenzene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:28	CJG	D
p-Isopropyltoluene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:28	CJG	D
Methyl t-Butyl Ether	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:28	CJG	D
4-Methyl-2-Pentanone(MIBK)	3.8U	U	ug/L	5.0	3.8	1.6	SW846 8260C		1/13/17 04:28	CJG	D
Methylene Chloride	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:28	CJG	D
Naphthalene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:28	CJG	D
n-Propylbenzene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:28	CJG	D
Styrene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:28	CJG	D
1,1,1,2-Tetrachloroethane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:28	CJG	D
1,1,2,2-Tetrachloroethane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:28	CJG	D
Tetrachloroethene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:28	CJG	D
Toluene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:28	CJG	D
Total Xylenes	2.3U	U	ug/L	3.0	2.3	1.0	SW846 8260C		1/13/17 04:28	CJG	D
1,2,3-Trichlorobenzene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:28	CJG	D
1,2,4-Trichlorobenzene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:28	CJG	D
1,1,1-Trichloroethane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:28	CJG	D
1,1,2-Trichloroethane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:28	CJG	D
Trichloroethene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:28	CJG	D
Trichlorofluoromethane	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:28	CJG	D
1,2,3-Trichloropropane	2.5U	U	ug/L	5.0	2.5	1.6	SW846 8260C		1/13/17 04:28	CJG	D
1,2,4-Trimethylbenzene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:28	CJG	D
1,3,5-Trimethylbenzene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:28	CJG	D
Vinyl Chloride	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:28	CJG	D
o-Xylene	0.75U	U	ug/L	1.0	0.75	0.33	SW846 8260C		1/13/17 04:28	CJG	D
mp-Xylene	1.5U	U	ug/L	2.0	1.5	0.66	SW846 8260C		1/13/17 04:28	CJG	D
Surrogate Recoveries	Results	Flag	Units	Limits			Method	Prepared By	Analyzed	By	Cntr
1,2-Dichloroethane-d4 (S)	106		%	81 - 118			SW846 8260C		1/13/17 04:28	CJG	D
4-Bromofluorobenzene (S)	107		%	85 - 114			SW846 8260C		1/13/17 04:28	CJG	D
Dibromofluoromethane (S)	90.8		%	80 - 119			SW846 8260C		1/13/17 04:28	CJG	D
Toluene-d8 (S)	97.9		%	89 - 112			SW846 8260C		1/13/17 04:28	CJG	D

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No TIC's Detected

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1/13/17 04:28 CPK D

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ANALYTICAL RESULTS

Workorder: 2201488 PQF060|FTMM Parcel 51 Waters

Lab ID: **2201488007** Date Collected: 1/11/2017 12:00 Matrix: Water
Sample ID: **PAR-51-545-TMW-101-14.0** Date Received: 1/11/2017 21:10

Parameters	Results	Flag	Units	LOQ	LOD	DL	Method	Prepared By	Analyzed	By	Cntr
SEMIVOLATILES											
Acenaphthene	3.3U	U	ug/L	6.7	3.3	0.50	SW846 8270D	1/13/17 PDK	1/17/17 20:03	CGS	B
Acenaphthylene	3.3U	U	ug/L	6.7	3.3	0.63	SW846 8270D	1/13/17 PDK	1/17/17 20:03	CGS	B
Anthracene	3.3U	U	ug/L	6.7	3.3	0.50	SW846 8270D	1/13/17 PDK	1/17/17 20:03	CGS	B
Benzidine	100U	U1	ug/L	100	100	10.3	SW846 8270D	1/13/17 PDK	1/17/17 20:03	CGS	B
Benzo(a)anthracene	3.3U	U	ug/L	6.7	3.3	0.43	SW846 8270D	1/13/17 PDK	1/17/17 20:03	CGS	B
Benzo(a)pyrene	3.3U	U	ug/L	6.7	3.3	0.73	SW846 8270D	1/13/17 PDK	1/17/17 20:03	CGS	B
Benzo(b)fluoranthene	3.3U	U	ug/L	6.7	3.3	0.37	SW846 8270D	1/13/17 PDK	1/17/17 20:03	CGS	B
Benzo(g,h,i)perylene	3.3U	U	ug/L	6.7	3.3	0.73	SW846 8270D	1/13/17 PDK	1/17/17 20:03	CGS	B
Benzo(k)fluoranthene	3.3U	U	ug/L	6.7	3.3	0.63	SW846 8270D	1/13/17 PDK	1/17/17 20:03	CGS	B
Benzyl Alcohol	6.7U	U	ug/L	26.7	6.7	0.77	SW846 8270D	1/13/17 PDK	1/17/17 20:03	CGS	B
4-Bromophenyl-phenylether	3.3U	U	ug/L	26.7	3.3	0.57	SW846 8270D	1/13/17 PDK	1/17/17 20:03	CGS	B
Butylbenzylphthalate	0.62J	J	ug/L	26.7	3.3	0.37	SW846 8270D	1/13/17 PDK	1/17/17 20:03	CGS	B
Carbazole	3.3U	U	ug/L	26.7	3.3	0.40	SW846 8270D	1/13/17 PDK	1/17/17 20:03	CGS	B
4-Chloro-3-methylphenol	3.3U	U	ug/L	26.7	3.3	0.63	SW846 8270D	1/13/17 PDK	1/17/17 20:03	CGS	B
4-Chloroaniline	3.3U	U	ug/L	26.7	3.3	0.70	SW846 8270D	1/13/17 PDK	1/17/17 20:03	CGS	B
bis(2-Chloroethoxy)methane	3.3U	U	ug/L	26.7	3.3	0.70	SW846 8270D	1/13/17 PDK	1/17/17 20:03	CGS	B
bis(2-Chloroethyl)ether	3.3U	U	ug/L	26.7	3.3	0.57	SW846 8270D	1/13/17 PDK	1/17/17 20:03	CGS	B
bis(2-Chloroisopropyl)ether	3.3U	U	ug/L	26.7	3.3	0.93	SW846 8270D	1/13/17 PDK	1/17/17 20:03	CGS	B
2-Chloronaphthalene	3.3U	U	ug/L	26.7	3.3	0.60	SW846 8270D	1/13/17 PDK	1/17/17 20:03	CGS	B
2-Chlorophenol	6.7U	U	ug/L	26.7	6.7	1.1	SW846 8270D	1/13/17 PDK	1/17/17 20:03	CGS	B
4-Chlorophenyl-phenylether	3.3U	U	ug/L	26.7	3.3	0.47	SW846 8270D	1/13/17 PDK	1/17/17 20:03	CGS	B
Chrysene	3.3U	U	ug/L	6.7	3.3	0.40	SW846 8270D	1/13/17 PDK	1/17/17 20:03	CGS	B
mp-Cresol	3.3U	U	ug/L	26.7	3.3	0.50	SW846 8270D	1/13/17 PDK	1/17/17 20:03	CGS	B
o-Cresol	3.3U	U	ug/L	26.7	3.3	0.83	SW846 8270D	1/13/17 PDK	1/17/17 20:03	CGS	B
Di-n-Butylphthalate	0.98J	J	ug/L	26.7	3.3	0.47	SW846 8270D	1/13/17 PDK	1/17/17 20:03	CGS	B
Di-n-Octylphthalate	3.3U	U	ug/L	26.7	3.3	0.33	SW846 8270D	1/13/17 PDK	1/17/17 20:03	CGS	B
Dibenzo(a,h)anthracene	3.3U	U	ug/L	6.7	3.3	0.70	SW846 8270D	1/13/17 PDK	1/17/17 20:03	CGS	B
Dibenzofuran	3.3U	U	ug/L	26.7	3.3	0.37	SW846 8270D	1/13/17 PDK	1/17/17 20:03	CGS	B
1,2-Dichlorobenzene	3.3U	U	ug/L	26.7	3.3	0.67	SW846 8270D	1/13/17 PDK	1/17/17 20:03	CGS	B
1,3-Dichlorobenzene	3.3U	U	ug/L	26.7	3.3	0.57	SW846 8270D	1/13/17 PDK	1/17/17 20:03	CGS	B
1,4-Dichlorobenzene	3.3U	U	ug/L	26.7	3.3	0.60	SW846 8270D	1/13/17 PDK	1/17/17 20:03	CGS	B
3,3-Dichlorobenzidine	10U	U	ug/L	53.3	10	1.6	SW846 8270D	1/13/17 PDK	1/17/17 20:03	CGS	B
2,4-Dichlorophenol	3.3U	U	ug/L	26.7	3.3	1.1	SW846 8270D	1/13/17 PDK	1/17/17 20:03	CGS	B
Diethylphthalate	3.3U	U	ug/L	26.7	3.3	0.60	SW846 8270D	1/13/17 PDK	1/17/17 20:03	CGS	B
2,4-Dimethylphenol	16.7U	U	ug/L	26.7	16.7	0.70	SW846 8270D	1/13/17 PDK	1/17/17 20:03	CGS	B
Dimethylphthalate	3.3U	U	ug/L	26.7	3.3	0.47	SW846 8270D	1/13/17 PDK	1/17/17 20:03	CGS	B
2,4-Dinitrophenol	26.7U	U	ug/L	53.3	26.7	6.0	SW846 8270D	1/13/17 PDK	1/17/17 20:03	CGS	B

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ANALYTICAL RESULTS

Workorder: 2201488 PQF060|FTMM Parcel 51 Waters

Lab ID: **2201488007**

Date Collected: 1/11/2017 12:00

Matrix: Water

Sample ID: **PAR-51-545-TMW-101-14.0**

Date Received: 1/11/2017 21:10

Parameters	Results	Flag	Units	LOQ	LOD	DL	Method	Prepared By	Analyzed	By	Cntr
2,4-Dinitrotoluene	3.3U	U	ug/L	26.7	3.3	0.40	SW846 8270D	1/13/17 PDK	1/17/17 20:03	CGS	B
2,6-Dinitrotoluene	3.3U	U	ug/L	26.7	3.3	0.70	SW846 8270D	1/13/17 PDK	1/17/17 20:03	CGS	B
1,2-Diphenylhydrazine	3.3U	U	ug/L	26.7	3.3	0.87	SW846 8270D	1/13/17 PDK	1/17/17 20:03	CGS	B
bis(2-Ethylhexyl)phthalate	2.9J	J	ug/L	26.7	3.3	0.73	SW846 8270D	1/13/17 PDK	1/17/17 20:03	CGS	B
Fluoranthene	3.3U	U	ug/L	6.7	3.3	0.57	SW846 8270D	1/13/17 PDK	1/17/17 20:03	CGS	B
Fluorene	3.3U	U	ug/L	6.7	3.3	0.67	SW846 8270D	1/13/17 PDK	1/17/17 20:03	CGS	B
Hexachlorobenzene	3.3U	U	ug/L	26.7	3.3	0.77	SW846 8270D	1/13/17 PDK	1/17/17 20:03	CGS	B
Hexachlorobutadiene	3.3U	U	ug/L	26.7	3.3	0.63	SW846 8270D	1/13/17 PDK	1/17/17 20:03	CGS	B
Hexachlorocyclopentadiene	6.7U	U	ug/L	26.7	6.7	0.57	SW846 8270D	1/13/17 PDK	1/17/17 20:03	CGS	B
Hexachloroethane	3.3U	U	ug/L	26.7	3.3	1.0	SW846 8270D	1/13/17 PDK	1/17/17 20:03	CGS	B
Indeno(1,2,3-cd)pyrene	3.3U	U	ug/L	6.7	3.3	0.33	SW846 8270D	1/13/17 PDK	1/17/17 20:03	CGS	B
Isophorone	3.3U	U	ug/L	26.7	3.3	0.50	SW846 8270D	1/13/17 PDK	1/17/17 20:03	CGS	B
2-Methyl-4,6-dinitrophenol	16.7U	U	ug/L	26.7	16.7	1.1	SW846 8270D	1/13/17 PDK	1/17/17 20:03	CGS	B
2-Methylnaphthalene	3.3U	U	ug/L	6.7	3.3	0.53	SW846 8270D	1/13/17 PDK	1/17/17 20:03	CGS	B
Naphthalene	3.3U	U	ug/L	6.7	3.3	0.40	SW846 8270D	1/13/17 PDK	1/17/17 20:03	CGS	B
2-Nitroaniline	3.3U	U	ug/L	26.7	3.3	0.67	SW846 8270D	1/13/17 PDK	1/17/17 20:03	CGS	B
3-Nitroaniline	6.7U	U	ug/L	26.7	6.7	0.60	SW846 8270D	1/13/17 PDK	1/17/17 20:03	CGS	B
4-Nitroaniline	3.3U	U	ug/L	26.7	3.3	1.4	SW846 8270D	1/13/17 PDK	1/17/17 20:03	CGS	B
Nitrobenzene	6.7U	U	ug/L	26.7	6.7	0.93	SW846 8270D	1/13/17 PDK	1/17/17 20:03	CGS	B
2-Nitrophenol	6.7U	U	ug/L	26.7	6.7	1.5	SW846 8270D	1/13/17 PDK	1/17/17 20:03	CGS	B
4-Nitrophenol	16.7U	U	ug/L	26.7	16.7	3.5	SW846 8270D	1/13/17 PDK	1/17/17 20:03	CGS	B
N-Nitrosodimethylamine	6.7U	U	ug/L	26.7	6.7	2.1	SW846 8270D	1/13/17 PDK	1/17/17 20:03	CGS	B
N-Nitroso-di-n-propylamine	3.3U	U	ug/L	26.7	3.3	0.80	SW846 8270D	1/13/17 PDK	1/17/17 20:03	CGS	B
N-Nitrosodiphenylamine	6.7U	U	ug/L	26.7	6.7	0.60	SW846 8270D	1/13/17 PDK	1/17/17 20:03	CGS	B
Pentachlorophenol	26.7U	U	ug/L	53.3	26.7	3.6	SW846 8270D	1/13/17 PDK	1/17/17 20:03	CGS	B
Phenanthrene	3.3U	U	ug/L	6.7	3.3	0.43	SW846 8270D	1/13/17 PDK	1/17/17 20:03	CGS	B
Phenol	3.3U	U	ug/L	26.7	3.3	0.77	SW846 8270D	1/13/17 PDK	1/17/17 20:03	CGS	B
Pyrene	3.3U	U	ug/L	6.7	3.3	0.53	SW846 8270D	1/13/17 PDK	1/17/17 20:03	CGS	B
1,2,4-Trichlorobenzene	3.3U	U	ug/L	26.7	3.3	0.43	SW846 8270D	1/13/17 PDK	1/17/17 20:03	CGS	B
2,4,5-Trichlorophenol	10U	U	ug/L	26.7	10	1.8	SW846 8270D	1/13/17 PDK	1/17/17 20:03	CGS	B
2,4,6-Trichlorophenol	3.3U	U	ug/L	26.7	3.3	1.9	SW846 8270D	1/13/17 PDK	1/17/17 20:03	CGS	B
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>			<i>Method</i>	<i>Prepared By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
2,4,6-Tribromophenol (S)	79.9		%	43 - 140			SW846 8270D	1/13/17 PDK	1/17/17 20:03	CGS	B
2-Fluorobiphenyl (S)	81.9		%	44 - 119			SW846 8270D	1/13/17 PDK	1/17/17 20:03	CGS	B
2-Fluorophenol (S)	49.1		%	19 - 119			SW846 8270D	1/13/17 PDK	1/17/17 20:03	CGS	B
Nitrobenzene-d5 (S)	75.4		%	44 - 120			SW846 8270D	1/13/17 PDK	1/17/17 20:03	CGS	B
Phenol-d5 (S)	29.7		%	13 - 49			SW846 8270D	1/13/17 PDK	1/17/17 20:03	CGS	B
Terphenyl-d14 (S)	64.1		%	50 - 134			SW846 8270D	1/13/17 PDK	1/17/17 20:03	CGS	B

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ANALYTICAL RESULTS

Workorder: 2201488 PQF060|FTMM Parcel 51 Waters

Lab ID: **2201488007**

Date Collected: 1/11/2017 12:00

Matrix: Water

Sample ID: **PAR-51-545-TMW-101-14.0**

Date Received: 1/11/2017 21:10

Parameters	Results	Flag	Units	LOQ	LOD	DL	Method	Prepared By	Analyzed	By	Cntr
Library Search - SemiVolatiles											
Cyclohexene	61.8	J N	ug/L				SW846 8270D	1/13/17 PDK	1/17/17 20:03	CGS	B
Octadecanoic acid	39.6	J N	ug/L				SW846 8270D	1/13/17 PDK	1/17/17 20:03	CGS	B
Phenol, 4,4'-butylidenebis[2-(	41.3	J N	ug/L				SW846 8270D	1/13/17 PDK	1/17/17 20:03	CGS	B
Unknown	26.2	J	ug/L				SW846 8270D	1/13/17 PDK	1/17/17 20:03	CGS	B
Unknown	374	J	ug/L				SW846 8270D	1/13/17 PDK	1/17/17 20:03	CGS	B
Unknown	432	J	ug/L				SW846 8270D	1/13/17 PDK	1/17/17 20:03	CGS	B
Unknown	76.4	J	ug/L				SW846 8270D	1/13/17 PDK	1/17/17 20:03	CGS	B



Mrs. Vanessa N Badman
Project Coordinator

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PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
2201488001	1	PAR-51-653-TMW-01-15.0	SW846 8270D	Benzidine
The QC sample type LCS for method SW846 8270D was outside the control limits for the analyte Benzidine. The % Recovery was reported as .48 and the control limits were 1 to 139.				
2201488001	2	PAR-51-653-TMW-01-15.0	SW846 8270D	2-Fluorobiphenyl
The surrogate 2-Fluorobiphenyl for method SW846 8270D was outside of control limits. The % Recovery was reported as 43.8 and the control limits were 44 to 119. This result was reported at a dilution of 1.				
2201488001	3	PAR-51-653-TMW-01-15.0	SW846 8270D	Terphenyl-d14
The surrogate Terphenyl-d14 for method SW846 8270D was outside of control limits. The % Recovery was reported as 22.4 and the control limits were 50 to 134. This result was reported at a dilution of 1.				
2201488003	1	PAR-51-EB-01102017	SW846 8270D	Benzidine
The QC sample type LCS for method SW846 8270D was outside the control limits for the analyte Benzidine. The % Recovery was reported as .48 and the control limits were 1 to 139.				
2201488004	1	PAR-51-545-TMW-01-14.0	SW846 8270D	4-Chloroaniline
The QC sample type MSD for method SW846 8270D was outside the control limits for the analyte 4-Chloroaniline. The % Recovery was reported as 30.2 and the control limits were 33 to 117.				
2201488004	2	PAR-51-545-TMW-01-14.0	SW846 8270D	4-Chloroaniline
The QC sample type MSD for method SW846 8270D was outside the control limits for the analyte 4-Chloroaniline. The RPD was reported as 35.7 and the upper control limit is 30.				
2201488004	3	PAR-51-545-TMW-01-14.0	SW846 8270D	Hexachlorocyclopentadiene
The QC sample type MS for method SW846 8270D was outside the control limits for the analyte Hexachlorocyclopentadiene. The % Recovery was reported as 25.8 and the control limits were 26 to 96.				
2201488004	4	PAR-51-545-TMW-01-14.0	SW846 8270D	Hexachlorocyclopentadiene
The QC sample type MSD for method SW846 8270D was outside the control limits for the analyte Hexachlorocyclopentadiene. The % Recovery was reported as 18.4 and the control limits were 26 to 96.				
2201488004	5	PAR-51-545-TMW-01-14.0	SW846 8270D	Hexachlorocyclopentadiene
The QC sample type MSD for method SW846 8270D was outside the control limits for the analyte Hexachlorocyclopentadiene. The RPD was reported as 33.2 and the upper control limit is 30.				
2201488004	6	PAR-51-545-TMW-01-14.0	SW846 8270D	4-Chlorophenyl-phenylether
The QC sample type MSD for method SW846 8270D was outside the control limits for the analyte 4-Chlorophenyl-phenylether. The % Recovery was reported as 48.4 and the control limits were 53 to 121.				
2201488004	7	PAR-51-545-TMW-01-14.0	SW846 8270D	4-Bromophenyl-phenylether
The QC sample type MSD for method SW846 8270D was outside the control limits for the analyte 4-Bromophenyl-phenylether. The % Recovery was reported as 48.4 and the control limits were 55 to 124.				
2201488004	8	PAR-51-545-TMW-01-14.0	SW846 8270D	Hexachlorobenzene
The QC sample type MSD for method SW846 8270D was outside the control limits for the analyte Hexachlorobenzene. The % Recovery was reported as 52.4 and the control limits were 53 to 125.				
2201488004	9	PAR-51-545-TMW-01-14.0	SW846 8270D	Phenanthrene
The QC sample type MSD for method SW846 8270D was outside the control limits for the analyte Phenanthrene. The % Recovery was reported as 50.8 and the control limits were 59 to 120.				
2201488004	10	PAR-51-545-TMW-01-14.0	SW846 8270D	Anthracene
The QC sample type MSD for method SW846 8270D was outside the control limits for the analyte Anthracene. The % Recovery was reported as 54.1 and the control limits were 57 to 123.				
2201488004	11	PAR-51-545-TMW-01-14.0	SW846 8270D	Di-n-Butylphthalate
The QC sample type MSD for method SW846 8270D was outside the control limits for the analyte Di-n-Butylphthalate. The % Recovery was reported as 51.7 and the control limits were 59 to 127.				
2201488004	12	PAR-51-545-TMW-01-14.0	SW846 8270D	Fluoranthene
The QC sample type MSD for method SW846 8270D was outside the control limits for the analyte Fluoranthene. The % Recovery was reported as 53.9 and the control limits were 57 to 128.				

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ANALYTICAL RESULTS

Workorder: 2201488 PQF060|FTMM Parcel 51 Waters

2201488004	13	PAR-51-545-TMW-01-14.0	SW846 8270D	Benzidine
The QC sample type LCS for method SW846 8270D was outside the control limits for the analyte Benzidine. The % Recovery was reported as .48 and the control limits were 1 to 139.				
2201488004	14	PAR-51-545-TMW-01-14.0	SW846 8270D	Benzidine
The QC sample type MS for method SW846 8270D was outside the control limits for the analyte Benzidine. The % Recovery was reported as 0 and the control limits were 1 to 139.				
2201488004	15	PAR-51-545-TMW-01-14.0	SW846 8270D	Benzidine
The QC sample type MSD for method SW846 8270D was outside the control limits for the analyte Benzidine. The % Recovery was reported as 0 and the control limits were 1 to 139.				
2201488004	16	PAR-51-545-TMW-01-14.0	SW846 8270D	Pyrene
The QC sample type MSD for method SW846 8270D was outside the control limits for the analyte Pyrene. The % Recovery was reported as 51.6 and the control limits were 57 to 126.				
2201488004	17	PAR-51-545-TMW-01-14.0	SW846 8270D	Butylbenzylphthalate
The QC sample type MSD for method SW846 8270D was outside the control limits for the analyte Butylbenzylphthalate. The % Recovery was reported as 48.8 and the control limits were 53 to 134.				
2201488004	18	PAR-51-545-TMW-01-14.0	SW846 8270D	3,3-Dichlorobenzidine
The QC sample type MS for method SW846 8270D was outside the control limits for the analyte 3,3-Dichlorobenzidine. The % Recovery was reported as 15.5 and the control limits were 27 to 129.				
2201488004	19	PAR-51-545-TMW-01-14.0	SW846 8270D	3,3-Dichlorobenzidine
The QC sample type MSD for method SW846 8270D was outside the control limits for the analyte 3,3-Dichlorobenzidine. The % Recovery was reported as 5.63 and the control limits were 27 to 129.				
2201488004	20	PAR-51-545-TMW-01-14.0	SW846 8270D	3,3-Dichlorobenzidine
The QC sample type MSD for method SW846 8270D was outside the control limits for the analyte 3,3-Dichlorobenzidine. The RPD was reported as 93.7 and the upper control limit is 30.				
2201488004	21	PAR-51-545-TMW-01-14.0	SW846 8270D	Benzo(a)anthracene
The QC sample type MSD for method SW846 8270D was outside the control limits for the analyte Benzo(a)anthracene. The % Recovery was reported as 52.6 and the control limits were 58 to 125.				
2201488004	22	PAR-51-545-TMW-01-14.0	SW846 8270D	Chrysene
The QC sample type MSD for method SW846 8270D was outside the control limits for the analyte Chrysene. The % Recovery was reported as 54.7 and the control limits were 59 to 123.				
2201488004	23	PAR-51-545-TMW-01-14.0	SW846 8270D	Benzo(k)fluoranthene
The QC sample type MSD for method SW846 8270D was outside the control limits for the analyte Benzo(k)fluoranthene. The % Recovery was reported as 55.9 and the control limits were 57 to 129.				
2201488004	24	PAR-51-545-TMW-01-14.0	SW846 8270D	Benzo(a)pyrene
The QC sample type MSD for method SW846 8270D was outside the control limits for the analyte Benzo(a)pyrene. The % Recovery was reported as 53.7 and the control limits were 54 to 128.				
2201488004	25	PAR-51-545-TMW-01-14.0	SW846 8270D	Terphenyl-d14
The surrogate Terphenyl-d14 for method SW846 8270D was outside of control limits. The % Recovery was reported as 35.1 and the control limits were 50 to 134. This result was reported at a dilution of 1.				
2201488004	26	PAR-51-545-TMW-01-14.0	SW846 8260C	cis-1,3-Dichloropropene
The QC sample type MS for method SW846 8260C was outside the control limits for the analyte cis-1,3-Dichloropropene. The % Recovery was reported as 74.3 and the control limits were 75 to 124.				
2201488004	27	PAR-51-545-TMW-01-14.0	SW846 8260C	Naphthalene
The QC sample type MSD for method SW846 8260C was outside the control limits for the analyte Naphthalene. The % Recovery was reported as 57.1 and the control limits were 61 to 128.				

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ANALYTICAL RESULTS

Workorder: 2201488 PQF060|FTMM Parcel 51 Waters

2201488005	1	PAR-51-EB-01112017	SW846 8270D	Benzidine
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The QC sample type LCS for method SW846 8270D was outside the control limits for the analyte Benzidine. The % Recovery was reported as .48 and the control limits were 1 to 139.

2201488007	1	PAR-51-545-TMW-101-14.0	SW846 8270D	Benzidine
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The QC sample type LCS for method SW846 8270D was outside the control limits for the analyte Benzidine. The % Recovery was reported as .48 and the control limits were 1 to 139.

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CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT /
SAMPLER. INSTRUCTIONS ON THE BACK.

COC
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1 of 1

* 2.2.0 1.4 8.8 *

Client Name: Parsons Federal			Container Type	AN	AN	AN	CG											
Address: 100 High St. 4th Floor Boston, MA 02110			Container Size	4 oz	4 oz	1L	40ml											
Contact: Lorraine Weber			Preservative	4c	4c	HCL	HCL											
Phone#: 315-552-9745			ANALYSES/METHOD REQUESTED															
Project Name#: FTMM																		
Bill To: Parsons Federal																		
TAT ☒ Normal-Standard TAT is 10-12 business days. ☐ Rush-Subject to ALS approval and surcharges.																		
Date Required: Approved?																		
Email? ☒ Y lorraine.weber@parsons.com																		
Fax? ☐ Y No:																		
Sample Description/Location (as it will appear on the lab report)			Sample Date	Time	*G or C	**Matrix	Enter Number of Containers Per Sample or Field Results Below.										Sample/COC Comments	
PAR-51-633-TMW-01-150			1/10/17	1407	G	GW												
2 PAR-51-TB-01102017			1/10/17		G	GW												
3 PAR-51-EB-01102017			1/10/17	1630	G	GW												
4 PAR-51-545-TMW-01-14.0			1/11/17	0815	G	GW												
2 PAR-51-545-TMW-101-14.0			1/11/17	1200	G	GW												
4 PAR-51-545-TMW-01-14.0-MS			1/11/17	0815	G	GW												
4 PAR-51-545-TMW-01-14.0-MSD			1/11/17	0815	G	GW												
5 PAR-51-EB-01112017			1/11/17	1100	G	GW												
6 PAR-51-TB-01112017			1/11/17		G	GW												
10																		
Project Comments: 748810 MDL Must Meet NJDEP Soil Cleanup Criteria and/or Groundwater Quality Standards			LOGGED BY (signature): <i>[Signature]</i>		DATE: 1/10/17		#1556											
			REVIEWED BY (signature):		DATE:		#											
Relinquished By / Company Name			Date	Time	Received By / Company Name			Date	Time									
1 <i>[Signature]</i> PARSONS			1/11/17	1155	2 <i>[Signature]</i> PARSONS			1/11/17	1200									
3 <i>[Signature]</i> PARSONS			1/11/17	1900	4 <i>[Signature]</i> PARSONS			1/11/17	1900									
5 <i>[Signature]</i> PARSONS			1/11/17	2110	6 <i>[Signature]</i> PARSONS			1/11/17	2110									
7					8													
9					10													
Data Deliverables																		
☐ Standard																		
☒ CLP-like																		
☐ USACE																		
Reportable to PADEP?																		
Yes ☐																		
PWSID #																		
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☐ PA																		
☐ NC																		
Sample Disposal																		
Lab ☐																		
Special ☐																		

* G=Grab; C=Composite **Matrix - AL=Air; DW=Drinking Water; GW=Groundwater; OL=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

ALS ENVIRONMENTAL SHIPPING ADDRESS: 1565 Jefferson Road, Building 300, Suite 360 Rochester, NY 14623 USA

Attachment F
Analyst Description of TICs Exceedances

From: Vanessa Badman
To: [Kosciewicz, Maryanne](#)
Cc: [Friesen, Kent](#); [Grill, Cris](#); [Molsberry, Amanda](#)
Subject: RE: FTMM - Parcel 51
Date: Thursday, April 27, 2017 12:40:32 PM

Hi Maryanne,
I heard back from Alan on your question:

"The library search results on the sample did yield several possibilities but the match qualities was poor, 40% and less. The results included organic acids and several classes of cyclic nitrogen containing compounds such as pyrazoles, imidazoles and thiazoles. The peaks identified and reported as unknowns were broad relative to analyte peaks that eluted at a similar retention time as seen in the MS and MSD. Broad late eluting peaks are usually due to high molecular weight compounds that do not elute before the end of the chromatographic run time and end up eluting late in the next chromatographic run as carryover. This would explain why we didn't see too much of the unknowns TICs in sample 2201488004, but the peaks started to show up in all subsequent analyses including the equipment blank. Another thing to note is the reduced sample volume used for the analysis. Reduced sample extraction volumes is a last resort when the matrix appears complex and /or viscous. Also to note, MS and MSD recoveries of the sample did exhibit some lower recoveries especially for the basic compounds indicating same sort of matrix affects."

Let me know if you have any other questions for him.

Thanks!

Regards,
Vanessa N. Badman
Project Manager, Environmental
Middletown, PA, USA

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-----Original Message-----

From: Kosciewicz, Maryanne [<mailto:Maryanne.Kosciewicz@parsons.com>]
Sent: Wednesday, April 26, 2017 10:58 AM
To: Vanessa Badman <Vanessa.Badman@alsglobal.com>
Cc: Friesen, Kent <Kent.Friesen@parsons.com>; Grill, Cris <Cris.Grill@parsons.com>; Molsberry, Amanda <Amanda.Molsberry@parsons.com>; Alan Lopez <Alan.Lopez@ALSGlobal.com>
Subject: FTMM - Parcel 51

Hi Vanessa,

Could the laboratory review the sample results for semivolatile samples 2201488004, -005, and -007? The concentrations of the total unknown semivolatile TICs is triggering an exceedance in standards. Does the lab have any explanation regarding the semivolatile TICs in these samples? Sample -004 is the sample, -007 is a field duplicate, and -005 is an equipment blank.

Thanks,
Maryanne

-----Original Message-----

From: Friesen, Kent
Sent: Wednesday, April 26, 2017 10:39 AM
To: Kosciwicz, Maryanne <Maryanne.Kosciwicz@parsons.com>; Molsberry, Amanda <Amanda.Molsberry@parsons.com>
Cc: Grill, Cris <Cris.Grill@parsons.com>
Subject: RE: Parcel 51, temp wells for USTs 545 and 653

I revised the attachment, which now shows all the chromatograms, in order of analysis.

I think someone should contact the lab about this and ask for their explanation. My main concern is the sum of SVOC TICs > the NJDEP Groundwater Quality Criteria (GWQC) of 500 ug/L, and how that ended up in the Equipment Blank and our Field Duplicate (but not in the primary sample). I think the multiple MSD outliers (but not in the MS) also suggest something going on at the lab.

Kent A. Friesen, P.E., P.G.
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kent.friesen@parsons.com

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