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249 Vanderbilt Avenue
Norwood, MA 02062

T: 781.278.3700

F: 781.278.5701

F: 781.278.5702

www.gza.com



March 22, 2018
File No. 01.0173060.52

Ms. Shauna Little
United States Environmental Protection Agency – Region 1
5 Post Office Square, Mail Code OEP06-4
Boston, Massachusetts 02109-3912

Re: Submittal of Revised Notice of Change
Request to Change Activity Area, Treatment System Components, Authorized Pollutant
Parameters and Administrative Information
Remediation General Permit #MAG910722
Eversource South Boston Pipe Type Cable 106-526,527 Repair Project
East 2nd Street between H Street and K Street
South Boston, Massachusetts 02127

Dear Ms. Little:

GZA GeoEnvironmental, Inc. (GZA), on behalf of our Client, NStar Electric Company d/b/a Eversource Energy (Eversource), is submitting the attached Notice of Change (NOC; Appendix A) for the Remediation General Permit (RGP) #MAG910722 for the South Boston Pipe Type Cable (PTC) 106-526,527 Repair Project (the Site) located on East 2nd Street between H Street and K Street in South Boston, Massachusetts. This NOC requests a change to the activity area and pollutant parameters. A Site Locus plan is included as Figure 1.

BACKGROUND

Eversource will be installing a new electric cable to service the Massachusetts Water Resources Authority (MWRA) Deer Island Wastewater Treatment Plant. This new cable will replace the existing cable currently servicing Deer Island. The new cable route begins at the K Street substation in South Boston where the existing groundwater treatment system is located. The cable crosses eastward through Massport's Conley Terminal, enters Boston Harbor at the east end of Conley Terminal, and crosses Boston Harbor eventually making landfall at Deer Island. This electric line will be the primary electric supply line to Deer Island. This electric cable facilitates the operations of the Deer Island plant to remove human, household, business, and industrial pollutants from wastewater that originates in homes and businesses in 43 greater Boston communities. It is the second largest treatment plant in the United States.

The new electric line includes the installation of five manholes that will likely require dewatering for approximately one to two months each. In the interest of time and to provide a logistical benefit, Eversource would like to utilize the existing groundwater treatment system already located in South Boston and authorized to discharge under the RGP MAG910722.

To meet this aggressive schedule required by state and federal agencies, the land portion of this work (including manhole installation) needs to commence in late March 2018.

The new manhole locations will be dewatered using a conventional pump and the groundwater will be temporarily stored in a 10,000 or 20,000 frac tank adjacent to each manhole. The groundwater will then be transported from the frac tanks to the existing treatment system via vacuum trucks and transferred to the frac tank associated with the



existing South Boston treatment system. Without utilizing this existing treatment system, Eversource may not be able to obtain the necessary dewatering permits in time to support this important project.

HEEC CABLE INFLUENT SAMPLING

From November 20, 2017 to February 13, 2018, Lightship Engineering LLC (Lightship) advanced soil borings LE-SB1 and LE-SB4 through LE-SB7 at the locations indicated on Figure 2. The soil boring locations correspond to the proposed electric manholes associated with the new electric line that will service MWRA's Deer Island Wastewater Treatment Plant. The soil borings were advanced to approximately 12 to 15 feet below grade using direct-push drilling methodology.

Soil borings LE-SB1, LE-SB7 and LE-SB4 through LE-SB6 were completed as temporary groundwater monitoring wells LE-TMW1 through LE-TMW5, respectively. The wells were constructed of one- or two-inch Schedule 40 PVC casing with up to ten feet of 0.010-inch slotted screen positioned approximately five feet into groundwater. Groundwater samples were collected utilizing the low flow purging methodology from LE-TMW1 through LE-TMW5 and submitted to a Commonwealth of Massachusetts certified analytical laboratory consistent with the Massachusetts RGP signed March 9, 2017. The laboratory analytical results are set forth in Table 1 and a copy of the laboratory analytical data packages are provided at Appendix B. Upon completion of sampling, each temporary groundwater well was removed, and the boreholes were backfilled with soil cuttings generated during soil boring advancement. Each soil boring location was patched with asphalt to match the surrounding grade.

NOTICE OF CHANGE

This NOC includes a request to change the authorized pollutant parameters and to notify the EPA of a change in activity area. As described above, Eversource anticipates that each of the five proposed manholes will require dewatering near the Paul J. Conley Terminal. The following constituents were detected in one or more of the groundwater samples collected by Lightship that are not included in the "known or believed present" list for the Site's RGP: total cyanide, total residual chlorine (TRC), antimony, mercury, selenium, tetrachloroethylene, trichloroethylene, bis(2-ethylhexyl)phthalate, benzo(a)pyrene, benzo(a)anthracene, benzo(b)fluoranthene, chrysene, indeno(1,2,3-cd)pyrene, and pentachlorophenol. Additionally, in at least one sample, the following constituents were detected at concentrations greater than was previously observed: total suspended solids, chloride, arsenic, cadmium, copper, iron, lead, nickel, and zinc. Given these results, the newly detected compounds will be added to the "known or believed present" list for the Site's existing RGP permit. The operator of the existing treatment system, CHES, does not believe changes to the system will be necessary to maintain compliance with the RGP. The expected termination date for this work is February 28, 2019. The NOC form is included as Appendix A. The laboratory analytical results are included as Appendix B. A revised groundwater flow process diagram is included as Figure 3.

Please do not hesitate to contact the undersigned at (781) 278-3700 if you have any questions or require further information.



Sincerely,
GZA GEOENVIRONMENTAL, INC.

A handwritten signature in blue ink, appearing to read 'James Roehrig'.

James Roehrig
Assistant Project Manager

A handwritten signature in blue ink, appearing to read 'John A. Colbert'.

John A. Colbert, PE
Senior Project Manager

A handwritten signature in blue ink, appearing to read 'Gregg McBride'.

Gregg McBride, LSP
Senior Principal

Attachments: Table 1 – Groundwater Analytical Data
 Figure 1 – Site Locus Plan
 Figure 2 – Site Plan
 Figure 3 – Groundwater Process Flow Diagram
 Appendix A – EPA Notice of Change Form
 Appendix B – Laboratory Analytical Results

cc: Eric Lamontagne, Eversource Energy
 Matthew Waldrip, Eversource Energy



TABLE

Table 1
Influent Concentrations
Eversource PTC 106-526,527 Repair Project
South Boston, MA

01.0173060.51
3/12/2018

CLIENT SAMPLE ID		INFLUENT-06.07.17	LE-TMW1	LE-TMW2	LE-TMW3	LE-TMW4	LE-TMW5
SAMPLING DATE		07-JUN-17	11/20/2017	2/12/2018	2/13/2018	2/13/2018	2/13/2018
LAB SAMPLE ID		L1718775-01	17K1132-01	18B0416-02	18B0433-02	18B0481-03	18B0481-04
	Units						
General Chemistry							
Chromium, Trivalent	mg/l	BRL<0.01	BRL<.010	BRL<.010	BRL<.050	BRL<.050	BRL<.010
Solids, Total Suspended	mg/l	350	22	7	53	71	1200
Anions by Ion Chromatography							
Chloride	mg/l	1110	807	1210	4920	2180	46.6
General Chemistry							
Cyanide, Total	mg/l	BRL<0.005	0.006	0.004	0.003	0.004	0.003
Chlorine, Total Residual	mg/l	BRL<0.02	BRL<0.020	BRL<0.020	BRL<0.020	0.054	BRL<0.020
Nitrogen, Ammonia	mg/l	3.89	0.075	0.266	0.278	1.00	0.791
TPH, SGT-HEM	mg/l	64.7	BRL<1.6	BRL<1.6	BRL<1.5	BRL<1.5	BRL<1.5
Phenolics, Total	mg/l	BRL<0.03	BRL<.0095	BRL<.011	BRL<.0010	BRL<.011	BRL<.0010
Chromium, Hexavalent	mg/l	BRL<0.01	BRL<.004	BRL<.004	BRL<.004	BRL<.004	BRL<.004
Total Hardness							
Hardness	mg/l	236	N/A	N/A	N/A	N/A	N/A
Total Metals							
Antimony, Total	mg/l	BRL<0.004	0.0028	BRL<.001	BRL<0.005	BRL<0.005	BRL<.001
Arsenic, Total	mg/l	0.00136	0.023	BRL<.001	0.0077	BRL<0.005	0.0038
Cadmium, Total	mg/l	0.00022	BRL<.00020	0.0011	BRL<.001	BRL<.001	0.00023
Chromium, Total	mg/l	0.00235	BRL<.010	BRL<.010	BRL<.050	BRL<.050	BRL<.010
Copper, Total	mg/l	0.01929	0.0093	0.016	0.027	0.018	0.0038
Iron, Total	mg/l	2.65	0.61	0.2	0.41	1.2	6.3
Lead, Total	mg/l	0.05938	0.014	0.012	BRL<.0025	0.016	0.088
Mercury, Total	mg/l	BRL<0.0002	0.00013	BRL<0.00010	BRL<0.00010	BRL<0.00010	0.00042
Nickel, Total	mg/l	0.00396	0.011	0.015	BRL<.025	BRL<.025	0.01
Selenium, Total	mg/l	BRL<0.005	0.0032	BRL<.0050	0.021	BRL<.025	BRL<.0050
Silver, Total	mg/l	BRL<0.0004	BRL<0.00020	BRL<0.00020	BRL<0.00020	BRL<0.00020	BRL<0.00020
Zinc, Total	mg/l	0.0407	0.042	0.100	BRL<0.1	BRL<0.1	0.055
Volatile Organics Compounds (VOCs)							
1,2-Dibromoethane	mg/l	BRL<0.00001	BRL<0.000021	BRL<0.000020	BRL<0.000020	BRL<0.021	BRL<0.000020
1,1,1,2-Tetrachloroethane	mg/l	BRL<0.0005	N/A	N/A	N/A	N/A	N/A
1,1,1-Trichloroethane	mg/l	BRL<0.0005	N/A	N/A	N/A	N/A	N/A
1,1,2,2-Tetrachloroethane	mg/l	BRL<0.0005	N/A	N/A	N/A	N/A	N/A
1,1,2-Trichloroethane	mg/l	BRL<0.00075	N/A	N/A	N/A	N/A	N/A
1,1-Dichloroethane	mg/l	BRL<0.00075	N/A	N/A	N/A	N/A	N/A
1,1-Dichloroethene	mg/l	BRL<0.0005	N/A	N/A	N/A	N/A	N/A
1,1-Dichloropropene	mg/l	BRL<0.0025	N/A	N/A	N/A	N/A	N/A
1,2,3-Trichlorobenzene	mg/l	BRL<0.0025	N/A	N/A	N/A	N/A	N/A
1,2,3-Trichloropropane	mg/l	BRL<0.005	N/A	N/A	N/A	N/A	N/A
1,2,4-Trichlorobenzene	mg/l	BRL<0.0025	N/A	N/A	N/A	N/A	N/A
1,2,4-Trimethylbenzene	mg/l	BRL<0.0025	N/A	N/A	N/A	N/A	N/A
1,2-Dibromo-3-chloropropane	mg/l	BRL<0.0025	N/A	N/A	N/A	N/A	N/A
1,2-Dibromoethane	mg/l	BRL<0.002	N/A	N/A	N/A	N/A	N/A
1,2-Dichlorobenzene	mg/l	BRL<0.0025	N/A	N/A	N/A	N/A	N/A
1,2-Dichloroethane	mg/l	BRL<0.0005	N/A	N/A	N/A	N/A	N/A
1,2-Dichloropropane	mg/l	BRL<0.0018	N/A	N/A	N/A	N/A	N/A
1,3,5-Trimethylbenzene	mg/l	BRL<0.0025	N/A	N/A	N/A	N/A	N/A
1,3-Dichlorobenzene	mg/l	BRL<0.0025	N/A	N/A	N/A	N/A	N/A
1,3-Dichloropropane	mg/l	BRL<0.0025	N/A	N/A	N/A	N/A	N/A
1,4-Dichlorobenzene	mg/l	BRL<0.0025	N/A	N/A	N/A	N/A	N/A
1,4-Dichlorobutane	mg/l	BRL<0.005	N/A	N/A	N/A	N/A	N/A
2,2-Dichloropropane	mg/l	BRL<0.0025	N/A	N/A	N/A	N/A	N/A
2-Butanone	mg/l	BRL<0.005	N/A	N/A	N/A	N/A	N/A
2-Hexanone	mg/l	BRL<0.005	N/A	N/A	N/A	N/A	N/A
4-Methyl-2-pentanone	mg/l	BRL<0.005	N/A	N/A	N/A	N/A	N/A
Acetone	mg/l	0.013	N/A	N/A	N/A	N/A	N/A
Acrylonitrile	mg/l	BRL<0.005	N/A	N/A	N/A	N/A	N/A
Benzene	mg/l	BRL<0.0005	N/A	N/A	N/A	N/A	N/A
Bromobenzene	mg/l	BRL<0.0025	N/A	N/A	N/A	N/A	N/A
Bromochloromethane	mg/l	BRL<0.0025	N/A	N/A	N/A	N/A	N/A
Bromodichloromethane	mg/l	BRL<0.0005	N/A	N/A	N/A	N/A	N/A
Bromoform	mg/l	BRL<0.002	N/A	N/A	N/A	N/A	N/A
Bromomethane	mg/l	BRL<0.001	N/A	N/A	N/A	N/A	N/A
Carbon disulfide	mg/l	BRL<0.005	N/A	N/A	N/A	N/A	N/A
Carbon tetrachloride	mg/l	BRL<0.0005	N/A	N/A	N/A	N/A	N/A
Chlorobenzene	mg/l	BRL<0.0005	N/A	N/A	N/A	N/A	N/A
Chloroethane	mg/l	BRL<0.001	N/A	N/A	N/A	N/A	N/A
Chloroform	mg/l	BRL<0.00075	N/A	N/A	N/A	N/A	N/A
Chloromethane	mg/l	BRL<0.0025	N/A	N/A	N/A	N/A	N/A
cis-1,2-Dichloroethene	mg/l	BRL<0.0005	N/A	N/A	N/A	N/A	N/A
cis-1,3-Dichloropropene	mg/l	BRL<0.0005	N/A	N/A	N/A	N/A	N/A
Dibromochloromethane	mg/l	BRL<0.0005	N/A	N/A	N/A	N/A	N/A
Dibromomethane	mg/l	BRL<0.005	N/A	N/A	N/A	N/A	N/A
Dichlorodifluoromethane	mg/l	BRL<0.005	N/A	N/A	N/A	N/A	N/A
Ethanol	mg/l	BRL<0.25	BRL<2.000	BRL<2.000	BRL<2.000	BRL<2.000	BRL<2.000
Ethyl ether	mg/l	BRL<0.0025	N/A	N/A	N/A	N/A	N/A
Ethyl methacrylate	mg/l	BRL<0.005	N/A	N/A	N/A	N/A	N/A
Ethylbenzene	mg/l	BRL<0.0005	N/A	N/A	N/A	N/A	N/A
Hexachlorobutadiene	mg/l	BRL<0.0005	N/A	N/A	N/A	N/A	N/A
Isopropylbenzene	mg/l	BRL<0.0005	N/A	N/A	N/A	N/A	N/A
Methyl tert butyl ether	mg/l	BRL<0.001	N/A	N/A	N/A	N/A	N/A
Methylene chloride	mg/l	BRL<0.003	N/A	N/A	N/A	N/A	N/A
n-Butylbenzene	mg/l	BRL<0.0005	N/A	N/A	N/A	N/A	N/A
n-Propylbenzene	mg/l	BRL<0.0005	N/A	N/A	N/A	N/A	N/A
Naphthalene	mg/l	BRL<0.0025	N/A	N/A	N/A	N/A	N/A
o-Chlorotoluene	mg/l	BRL<0.0025	N/A	N/A	N/A	N/A	N/A
o-Xylene	mg/l	BRL<0.001	N/A	N/A	N/A	N/A	N/A
p-Chlorotoluene	mg/l	BRL<0.0025	N/A	N/A	N/A	N/A	N/A
p-Isopropyltoluene	mg/l	BRL<0.0005	N/A	N/A	N/A	N/A	N/A
p/m-Xylene	mg/l	BRL<0.001	N/A	N/A	N/A	N/A	N/A
sec-Butylbenzene	mg/l	BRL<0.0005	N/A	N/A	N/A	N/A	N/A
Styrene	mg/l	BRL<0.001	N/A	N/A	N/A	N/A	N/A
Tert-Butyl Alcohol	mg/l	BRL<0.01	N/A	N/A	N/A	N/A	N/A
tert-Butylbenzene	mg/l	BRL<0.0025	N/A	N/A	N/A	N/A	N/A
Tertiary-Amyl Methyl Ether	mg/l	BRL<0.002	N/A	N/A	N/A	N/A	N/A
Tetrachloroethene	mg/l	BRL<0.0005	0.00076	BRL<0.0020	BRL<0.0020	BRL<0.0020	BRL<0.0020
Tetrahydrofuran	mg/l	BRL<0.005	N/A	N/A	N/A	N/A	N/A
Toluene	mg/l	BRL<0.00075	N/A	N/A	N/A	N/A	N/A
trans-1,2-Dichloroethene	mg/l	BRL<0.00075	N/A	N/A	N/A	N/A	N/A
trans-1,3-Dichloropropene	mg/l	BRL<0.0005	N/A	N/A	N/A	N/A	N/A
trans-1,4-Dichloro-2-butene	mg/l	BRL<0.0025	N/A	N/A	N/A	N/A	N/A
Trichloroethene	mg/l	BRL<0.0005	0.0025	BRL<0.0020	BRL<0.0020	BRL<0.0020	BRL<0.0020
Trichlorofluoromethane	mg/l	BRL<0.0025	N/A	N/A	N/A	N/A	N/A
Vinyl acetate	mg/l	BRL<0.005	N/A	N/A	N/A	N/A	N/A
Vinyl chloride	mg/l	BRL<0.001	N/A	N/A	N/A	N/A	N/A
Xylenes, Total	mg/l	BRL<0.001	N/A	N/A	N/A	N/A	N/A
1,4-Dioxane	mg/l	BRL<0.003	N/A	N/A	N/A	N/A	N/A

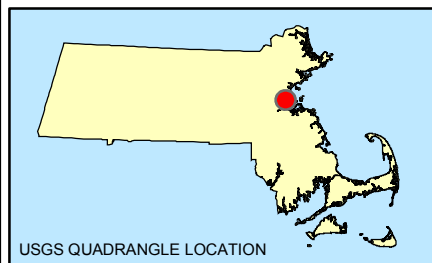
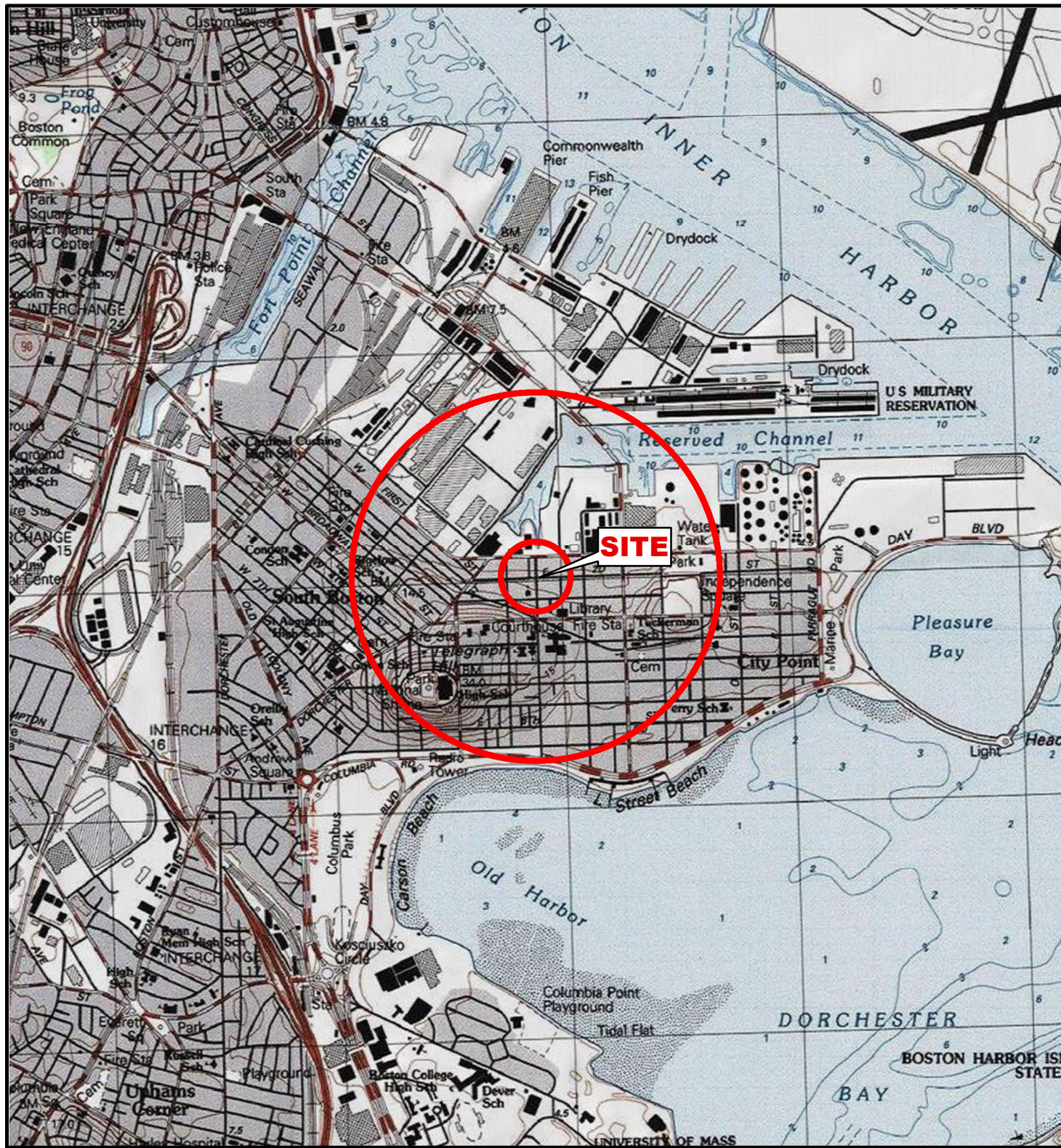
Table 1
Influent Concentrations
Eversource PTC 106-526,527 Repair Project
South Boston, MA

01.0173060.51
3/12/2018

CLIENT SAMPLE ID		INFLUENT-06.07.17	LE-TMW1	LE-TMW2	LE-TMW3	LE-TMW4	LE-TMW5
SAMPLING DATE		07-JUN-17	11/20/2017	2/12/2018	2/13/2018	2/13/2018	2/13/2018
LAB SAMPLE ID		L1718775-01	17K1132-01	18B0416-02	18B0433-02	18B0481-03	18B0481-04
	Units						
Semivolatile Organics Compounds (SVOCs)							
1,2,4-Trichlorobenzene	mg/l	BRL<0.05	N/A	N/A	N/A	N/A	N/A
1,2-Dichlorobenzene	mg/l	BRL<0.02	N/A	N/A	N/A	N/A	N/A
1,3-Dichlorobenzene	mg/l	BRL<0.02	N/A	N/A	N/A	N/A	N/A
1,4-Dichlorobenzene	mg/l	BRL<0.02	N/A	N/A	N/A	N/A	N/A
2,4,5-Trichlorophenol	mg/l	BRL<0.05	N/A	N/A	N/A	N/A	N/A
2,4,6-Trichlorophenol	mg/l	BRL<0.05	N/A	N/A	N/A	N/A	N/A
2,4-Dichlorophenol	mg/l	BRL<0.05	N/A	N/A	N/A	N/A	N/A
2,4-Dimethylphenol	mg/l	BRL<0.05	N/A	N/A	N/A	N/A	N/A
2,4-Dinitrophenol	mg/l	BRL<0.2	N/A	N/A	N/A	N/A	N/A
2,4-Dinitrotoluene	mg/l	BRL<0.05	N/A	N/A	N/A	N/A	N/A
2,6-Dinitrotoluene	mg/l	BRL<0.05	N/A	N/A	N/A	N/A	N/A
2-Chlorophenol	mg/l	BRL<0.02	N/A	N/A	N/A	N/A	N/A
2-Methylphenol	mg/l	BRL<0.05	N/A	N/A	N/A	N/A	N/A
2-Nitroaniline	mg/l	BRL<0.05	N/A	N/A	N/A	N/A	N/A
2-Nitrophenol	mg/l	BRL<0.1	N/A	N/A	N/A	N/A	N/A
3,3'-Dichlorobenzidine	mg/l	BRL<0.05	N/A	N/A	N/A	N/A	N/A
3-Methylphenol/4-Methylphenol	mg/l	BRL<0.05	N/A	N/A	N/A	N/A	N/A
3-Nitroaniline	mg/l	BRL<0.05	N/A	N/A	N/A	N/A	N/A
4,6-Dinitro-o-cresol	mg/l	BRL<0.1	N/A	N/A	N/A	N/A	N/A
4-Bromophenyl phenyl ether	mg/l	BRL<0.02	N/A	N/A	N/A	N/A	N/A
4-Chloroaniline	mg/l	BRL<0.05	N/A	N/A	N/A	N/A	N/A
4-Chlorophenyl phenyl ether	mg/l	BRL<0.02	N/A	N/A	N/A	N/A	N/A
4-Nitroaniline	mg/l	BRL<0.05	N/A	N/A	N/A	N/A	N/A
4-Nitrophenol	mg/l	BRL<0.1	N/A	N/A	N/A	N/A	N/A
Aniline	mg/l	BRL<0.02	N/A	N/A	N/A	N/A	N/A
Azobenzene	mg/l	BRL<0.02	N/A	N/A	N/A	N/A	N/A
Benzidine	mg/l	BRL<0.2	N/A	N/A	N/A	N/A	N/A
Benzoic Acid	mg/l	BRL<0.5	N/A	N/A	N/A	N/A	N/A
Benzyl Alcohol	mg/l	BRL<0.02	N/A	N/A	N/A	N/A	N/A
Biphenyl	mg/l	BRL<0.02	N/A	N/A	N/A	N/A	N/A
Bis(2-chloroethoxy)methane	mg/l	BRL<0.05	N/A	N/A	N/A	N/A	N/A
Bis(2-chloroethyl)ether	mg/l	BRL<0.02	N/A	N/A	N/A	N/A	N/A
Bis(2-chloroisopropyl)ether	mg/l	BRL<0.02	N/A	N/A	N/A	N/A	N/A
Bis(2-ethylhexyl)phthalate	mg/l	BRL<0.03	0.00047	0.00035	0.00073	0.00094	0.0012
Butyl benzyl phthalate	mg/l	BRL<0.05	N/A	N/A	N/A	N/A	N/A
Carbazole	mg/l	BRL<0.02	N/A	N/A	N/A	N/A	N/A
Di-n-butylphthalate	mg/l	BRL<0.05	N/A	N/A	N/A	N/A	N/A
Di-n-octylphthalate	mg/l	BRL<0.05	N/A	N/A	N/A	N/A	N/A
Dibenzofuran	mg/l	BRL<0.02	N/A	N/A	N/A	N/A	N/A
Diethyl phthalate	mg/l	BRL<0.05	N/A	N/A	N/A	N/A	N/A
Dimethyl phthalate	mg/l	BRL<0.05	N/A	N/A	N/A	N/A	N/A
Hexachlorocyclopentadiene	mg/l	BRL<0.2	N/A	N/A	N/A	N/A	N/A
Isophorone	mg/l	BRL<0.05	N/A	N/A	N/A	N/A	N/A
n-Nitrosodi-n-propylamine	mg/l	BRL<0.05	N/A	N/A	N/A	N/A	N/A
n-Nitrosodimethylamine	mg/l	BRL<0.02	N/A	N/A	N/A	N/A	N/A
NDPA/DPA	mg/l	BRL<0.02	N/A	N/A	N/A	N/A	N/A
Nitrobenzene	mg/l	BRL<0.02	N/A	N/A	N/A	N/A	N/A
p-Chloro-m-cresol	mg/l	BRL<0.02	N/A	N/A	N/A	N/A	N/A
Phenol	mg/l	BRL<0.05	N/A	N/A	N/A	N/A	N/A
Pyridine	mg/l	BRL<0.035	N/A	N/A	N/A	N/A	N/A
1-Methylnaphthalene	mg/l	BRL<0.0005	N/A	N/A	N/A	N/A	N/A
2-Chloronaphthalene	mg/l	BRL<0.001	N/A	N/A	N/A	N/A	N/A
2-Methylnaphthalene	mg/l	BRL<0.0005	N/A	N/A	N/A	N/A	N/A
Acenaphthene	mg/l	BRL<0.0005	N/A	N/A	N/A	N/A	N/A
Acenaphthylene	mg/l	BRL<0.0005	N/A	N/A	N/A	N/A	N/A
Anthracene	mg/l	BRL<0.0005	N/A	N/A	N/A	N/A	N/A
Benzo(a)anthracene	mg/l	BRL<0.0005	0.00041	0.00028	BRL<.00005	0.00011	0.00018
Benzo(a)pyrene	mg/l	BRL<0.0005	0.00043	0.00028	BRL<.00010	BRL<.00011	0.0002
Benzo(b)fluoranthene	mg/l	BRL<0.0005	0.00052	0.00035	BRL<.00005	0.00011	0.00026
Benzo(ghi)perylene	mg/l	BRL<0.0005	N/A	N/A	N/A	N/A	N/A
Benzo(k)fluoranthene	mg/l	BRL<0.0005	N/A	N/A	N/A	N/A	N/A
Chrysene	mg/l	BRL<0.0005	0.0004	0.00024	BRL<.00020	BRL<.00021	BRL<.00020
Dibenzo(a,h)anthracene	mg/l	BRL<0.0005	N/A	N/A	N/A	N/A	N/A
Fluoranthene	mg/l	0.00076	N/A	N/A	N/A	N/A	N/A
Fluorene	mg/l	BRL<0.0005	N/A	N/A	N/A	N/A	N/A
Hexachlorobenzene	mg/l	BRL<0.004	N/A	N/A	N/A	N/A	N/A
Hexachlorobutadiene	mg/l	BRL<0.0025	N/A	N/A	N/A	N/A	N/A
Hexachloroethane	mg/l	BRL<0.004	N/A	N/A	N/A	N/A	N/A
Indeno(1,2,3-cd)pyrene	mg/l	BRL<0.0005	0.00026	0.00022	BRL<.00020	BRL<.00021	BRL<.00020
Naphthalene	mg/l	BRL<0.0005	N/A	N/A	N/A	N/A	N/A
Pentachlorophenol	mg/l	BRL<0.004	BRL<0.00095	BRL<.0011	BRL<0.0010	BRL<0.0011	0.00076
Phenanthrene	mg/l	0.0015	N/A	N/A	N/A	N/A	N/A
Pyrene	mg/l	0.00078	N/A	N/A	N/A	N/A	N/A
Group I PAHs ⁴	mg/l	0	0.00202	0.00137	0	0.00022	0.00064
Group II PAHs ⁵	mg/l	0.00304	0	0	0	0	0
Polychlorinated Biphenyls (PCBs)							
Aroclor 1016	mg/l	BRL<0.00025	BRL<0.00010	BRL<0.00011	BRL<0.00010	BRL<0.00010	BRL<0.00010
Aroclor 1221	mg/l	BRL<0.00025	BRL<0.00010	BRL<0.00011	BRL<0.00010	BRL<0.00010	BRL<0.00010
Aroclor 1232	mg/l	BRL<0.00025	BRL<0.00010	BRL<0.00011	BRL<0.00010	BRL<0.00010	BRL<0.00010
Aroclor 1242	mg/l	BRL<0.00025	BRL<0.00010	BRL<0.00011	BRL<0.00010	BRL<0.00010	BRL<0.00010
Aroclor 1248	mg/l	BRL<0.00025	BRL<0.00010	BRL<0.00011	BRL<0.00010	BRL<0.00010	BRL<0.00010
Aroclor 1254	mg/l	BRL<0.00025	BRL<0.00010	BRL<0.00011	BRL<0.00010	BRL<0.00010	BRL<0.00010
Aroclor 1260	mg/l	BRL<0.0002	BRL<0.00010	BRL<0.00011	BRL<0.00010	BRL<0.00010	BRL<0.00010
Notes:							
1. "BRL" indicates the analyte was not detected above its detection limit.							
2. Bold indicates the sample was detected.							
3. "N/A" denotes the analyte was not analyzed.							
4. Group I PAHs = Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Chrysene, Dibenzo(a,h)anthracene, and Indeno(1,2,3-cd)pyrene.							
5. Group II PAHs = acenaphthene, acenaphthylene, anthracene, benzo(g,h,i)perylene, fluoranthene, fluorene, phenanthrene, and pyrene.							
6. "INFLUENT-06.07.17" was collected by GZA personnel for the original RGP application. Samples "LE-TMW-1" through "LE-TMW5" were collected by Lightship personnel.							



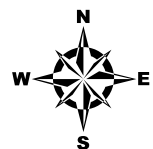
FIGURES



SOURCE : THIS MAP CONTAINS THE ESRI ARCGIS ONLINE USA TOPOGRAPHIC MAP SERVICE, PUBLISHED DECEMBER 12, 2009 BY ESRI ARCGIS SERVICES AND UPDATED AS NEEDED. THIS SERVICE USES UNIFORM NATIONALLY RECOGNIZED DATUM AND CARTOGRAPHY STANDARDS AND A VARIETY OF AVAILABLE SOURCES FROM SEVERAL DATA PROVIDERS.



Data Supplied by :



PROJ. MGR.: JJR
DESIGNED BY: JJR
REVIEWED BY: GWM
OPERATOR: ADP
DATE: 06-26-2017

LOCUS PLAN
SHOWING 500 FOOT & 1/2 MILE RADII
IMMEDIATE RESPONSE ACTION (IRA) PLAN
EAST 2ND STREET & I STREET
BOSTON, MASSACHUSETTS

PROJECT NO.
01.0173060.51
FIGURE NO.
1





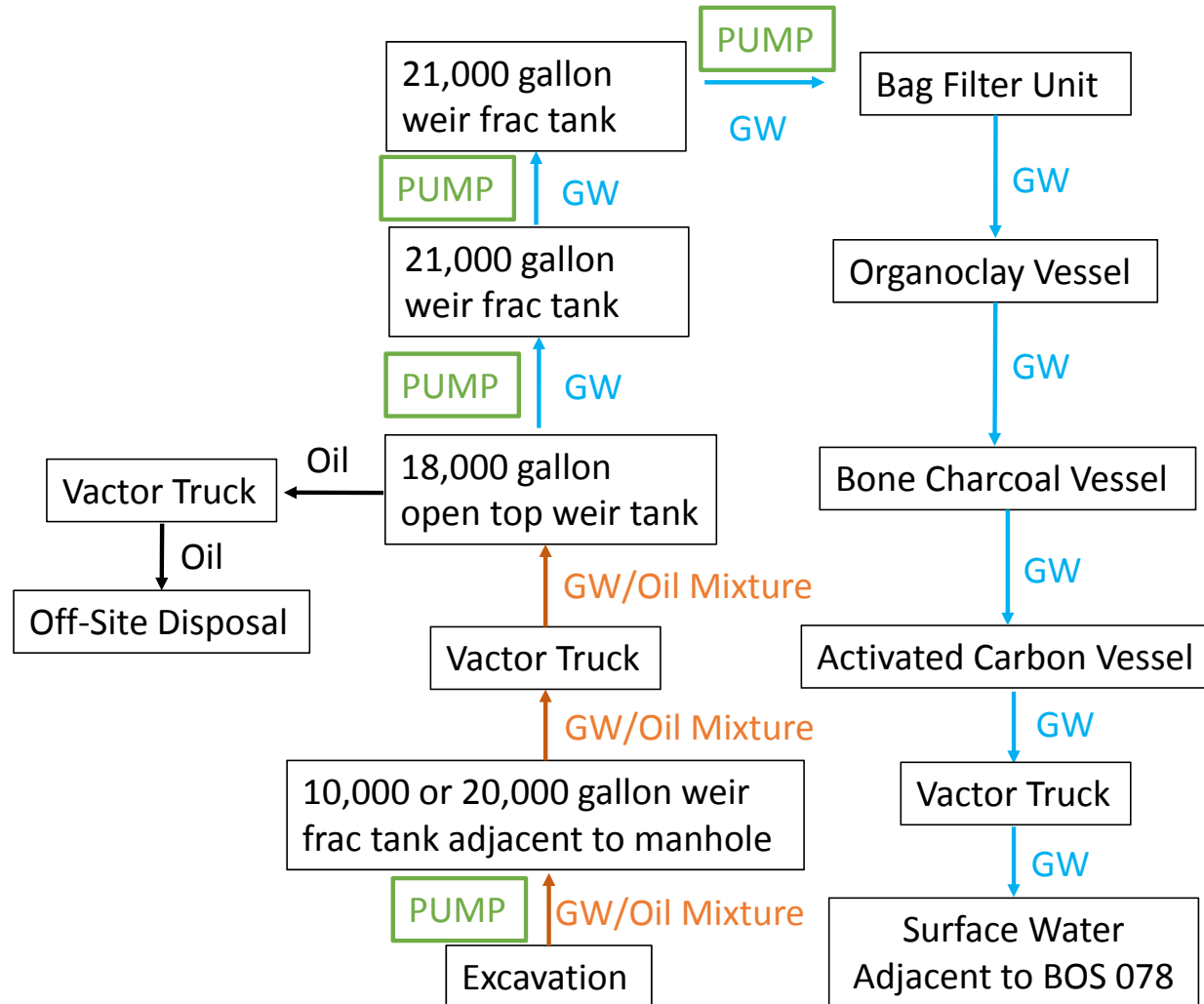
LIGHTSHIP
ENGINEERING
ENVIRONMENTAL & LAND-USE CONSULTANTS
39 Industrial Park Road • Unit C • Plymouth, Massachusetts 02160 • Phone: (508) 838-1344 • Fax: (508) 838-1360

FIGURE 2
Site Plan

Client	Eversource Energy 247 Station Avenue Westwood, Massachusetts	Project	HEEC Land Cable South Boston and Deer Island, Massachusetts	Date: 3/14/2018	Drawn by: KDP	500.98.12
				Sheet No. 1 of 1	Scale: 1" ~ 500'	

FIGURE 3

EVERSOURCE SOUTH BOSTON - GROUNDWATER PROCESS FLOW DIAGRAM





Appendix A: Notice of Change Form

II. Suggested Format for the Remediation General Permit Notice of Change (NOC)

A. General site information

1. NPDES permit number assigned by EPA: MAG910722			
2. Name of site: Eversource South Boston - Pipe Type Cable (PTC) 106-526, 527 Repair Project		Site address: 2nd Street between I Street and K Street	
		Street:	
		City: South Boston	State: MA Zip: 02127
3. Site owner Eversource Energy Owner is (check one): ☐ Federal ☐ State/Tribal ☒ Private ☐ Other, if so, describe:		Contact Person: Eric Lamontagne	
		Telephone: 339-987-7018	Email: eric.lamontagne@eversource.com
		Mailing address: 760 Main Street	
		Street:	
		City: Walpole	State: MA Zip: 02081
4. Site operator, if different than owner Clean Harbors Environmental Services		Contact Person: Edwin Robert Paul, Jr.	
		Telephone: 800-645-8265	Email: paulb@cleanharbors.com
		Mailing address:	
		Street: 609 Pleasant Street	
		City: Weymouth	State: MA Zip: 02189
5. Discharge identification: Catch basin located on Eversource Station 385 property		Discharge location: 42°20'23.83"N, 71° 2'19.93"W	Receiving water(s): Boston Inner Harbor (MA 70-02)

B. Type of change(s) requested

Requested change (check all that apply):	
☐	1. Request for reduction in monitoring requirements to no less than once per year, based on monitoring data attached in accordance with Appendix IV, Part 2 instructions. Written approval by EPA is required for this change to be effective.
☐	i. Influent monitoring requirement reduction based on monitoring data for six (6) consecutive months and ten (10) samples.
☐	ii. Effluent monitoring requirement reduction based on monitoring data for six (6) consecutive months and ten (10) samples that are in compliance with the RGP effluent limitations, and data and BMP requirements.
☐	2. Request for site-specific effluent flow limitation, which will not exceed 1.0 MGD or the design flow of the treatment system, or site-specific monitoring requirement that eliminates flow meter requirement based on written rationale attached in accordance with Appendix IV, Part 2 instructions. Written approval by EPA is required for this change to be effective.
☐	3. Request for a change in pH range approved by NHDES, based on supporting documentation attached in accordance with Appendix IV, Part 2 instructions. Written approval by EPA is required for this change to be effective.
☒	4. Request for change in authorized pollutants or pollutant parameters, based on monitoring data attached in accordance with Appendix IV, Part 2 instructions. This type of change requires written approval by EPA. Additional effluent limitations and/or monitoring requirements may apply.
☐	5. Request to discharge chemical(s) and/or additive(s) that were not disclosed in the NOI submitted for the site, based on written rationale and/or monitoring data attached in accordance with Appendix IV, Part 2 instructions. Written approval by EPA is required for this change to be effective.
☒	6. Change to administrative information. Supporting documentation is attached in accordance with Appendix IV, Part 2 instructions.
☐	7. Notification of a change in discharge location. The receiving water information submitted with the NOI for the site remains unchanged. Supporting documentation is attached in accordance with Appendix IV, Part 2 instructions.
☒	8. Notification of a change in activity area. The receiving water information submitted with the NOI for the site and the operator named in the authorization to discharge remain unchanged. Any change in treatment or discharge location are also included in the NOC, or are unchanged. Supporting documentation is attached in accordance with Appendix IV, Part 2 instructions.
☒	9. Notification of a change to a treatment system or process that adds or removes any major component. Supporting rationale is attached in accordance with Appendix IV, Part 2 instructions.
☐	10. Notification of a temporary cessation of discharge greater than 90 days. Supporting rationale is attached in accordance with Appendix IV, Part 2 instructions.

C. Certification requirement

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I have no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Notification provided to the appropriate State, including a copy of this NOC.

Check one: Yes ☒ No ☐

Notification has been provided to the municipality in which the discharge is located, including a copy of this NOC, if requested.

Check one: Yes ☒ No ☐

Notification has been provided to the owner of a private or municipal storm sewer system, if such system is used for site discharges, including a copy of this NOC, if requested.

Check one: Yes ☐ No ☐ NA ☒

Signature:



Date: 03/22/2018

Print Name and Title: Eric Lamontagne, Supervisor



Appendix B: Laboratory Analytical Data

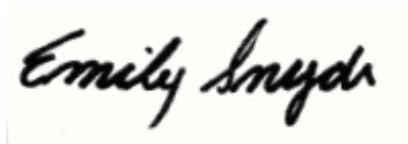
November 29, 2017

Kevin Paradise
Lightship Engineering, LLC
39 Industrial Park Road
Plymouth, MA 02360

Project Location: South Boston, MA
Client Job Number:
Project Number: 500.98.12
Laboratory Work Order Number: 17K1132

Enclosed are results of analyses for samples received by the laboratory on November 20, 2017. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Emily Snyder". The signature is written in a cursive, flowing style.

Emily E. Snyder
Project Manager

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Lightship Engineering, LLC
39 Industrial Park Road
Plymouth, MA 02360
ATTN: Kevin Paradise

REPORT DATE: 11/29/2017

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 500.98.12

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 17K1132

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: South Boston, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
LE-TMW1	17K1132-01	Ground Water		1671A	NY NELAP 10026/ MA M-NY044 +others
				EPA 1664B	
				EPA 200.7	
				EPA 200.8	
				EPA 245.1	NY11393/MA-MA1138/M A1110
				EPA 300.0	
				EPA 504.1	
				EPA 608	
				EPA 624	MA M-MA-086/CT PH-0574/NY11148
				EPA 625	
				SM19-22 4500 NH3 C	
				SM21-22 2540D	
				SM21-22 3500 Cr B	MA M-MA-086/CT PH-0574/NY11148
				SM21-22 4500 CL G	
				SM21-22 4500 CN E	
				SW-846 8015C	
				SW-846 8270D	NY NELAP 10026/ MA M-NY044 +others
				Tri Chrome Calc.	

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

EPA 608**Qualifications:****V-06**

Continuing calibration did not meet method specifications and was biased on the high side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the high side.

Analyte & Samples(s) Qualified:**Aroclor-1260 [2C]**

B191552-BS1, B191552-BSD1

EPA 624**Qualifications:****L-01**

Laboratory fortified blank /laboratory control sample recovery outside of control limits. Data validation is not affected since all results are "not detected" for all samples in this batch for this compound and bias is on the high side.

Analyte & Samples(s) Qualified:**1,4-Dioxane**

B191645-BS1

EPA 625**Qualifications:****S-07**

One associated surrogate standard recovery is outside of control limits but the other(s) is/are within limits. All recoveries are > 10%.

Analyte & Samples(s) Qualified:**2,4,6-Tribromophenol**

17K1132-01[LE-TMW1], 17K1132-01RE1[LE-TMW1]

V-04

Initial calibration did not meet method specifications. Compound was calibrated using a response factor where %RSD is outside of method specified criteria.

Analyte & Samples(s) Qualified:**Benzidine**

17K1132-01[LE-TMW1], B191597-BLK1, B191597-BLK2, B191597-BS1, B191597-BSD1

V-05

Continuing calibration did not meet method specifications and was biased on the low side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the low side.

Analyte & Samples(s) Qualified:**4-Nitrophenol**

17K1132-01[LE-TMW1], B191597-BLK1, B191597-BLK2, B191597-BS1, B191597-BSD1

Benzo(g,h,i)perylene

17K1132-01[LE-TMW1], B191597-BLK1, B191597-BLK2, B191597-BS1, B191597-BSD1

V-19

Initial calibration did not meet method specifications. Compound was calibrated using linear regression with correlation coefficient <0.99. Reduced precision and accuracy may be associated with reported result.

Analyte & Samples(s) Qualified:**2,4-Dinitrophenol**

17K1132-01[LE-TMW1], B191597-BLK1, B191597-BLK2, B191597-BS1, B191597-BSD1

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

A handwritten signature in black ink, appearing to read "Lisa Worthington", is written over a light pink rectangular background.

Lisa A. Worthington
Project Manager

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: South Boston, MA

Sample Description:

Work Order: 17K1132

Date Received: 11/20/2017

Field Sample #: LE-TMW1

Sampled: 11/20/2017 13:30

Sample ID: 17K1132-01

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	50	4.9	µg/L	1		EPA 624	11/22/17	11/23/17 1:15	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	0.11	µg/L	1		EPA 624	11/22/17	11/23/17 1:15	EEH
Benzene	ND	1.0	0.12	µg/L	1		EPA 624	11/22/17	11/23/17 1:15	EEH
tert-Butyl Alcohol (TBA)	ND	20	2.2	µg/L	1		EPA 624	11/22/17	11/23/17 1:15	EEH
Carbon Tetrachloride	ND	2.0	0.25	µg/L	1		EPA 624	11/22/17	11/23/17 1:15	EEH
1,2-Dichlorobenzene	ND	2.0	0.17	µg/L	1		EPA 624	11/22/17	11/23/17 1:15	EEH
1,3-Dichlorobenzene	ND	2.0	0.17	µg/L	1		EPA 624	11/22/17	11/23/17 1:15	EEH
1,4-Dichlorobenzene	ND	2.0	0.15	µg/L	1		EPA 624	11/22/17	11/23/17 1:15	EEH
1,2-Dichloroethane	ND	2.0	0.19	µg/L	1		EPA 624	11/22/17	11/23/17 1:15	EEH
cis-1,2-Dichloroethylene	ND	1.0	0.15	µg/L	1		EPA 624	11/22/17	11/23/17 1:15	EEH
1,1-Dichloroethane	ND	2.0	0.16	µg/L	1		EPA 624	11/22/17	11/23/17 1:15	EEH
1,1-Dichloroethylene	ND	2.0	0.21	µg/L	1		EPA 624	11/22/17	11/23/17 1:15	EEH
1,4-Dioxane	ND	50	26	µg/L	1		EPA 624	11/22/17	11/23/17 1:15	EEH
Ethylbenzene	ND	2.0	0.13	µg/L	1		EPA 624	11/22/17	11/23/17 1:15	EEH
Methyl tert-Butyl Ether (MTBE)	ND	2.0	0.090	µg/L	1		EPA 624	11/22/17	11/23/17 1:15	EEH
Methylene Chloride	ND	5.0	3.2	µg/L	1		EPA 624	11/22/17	11/23/17 1:15	EEH
Tetrachloroethylene	0.76	2.0	0.27	µg/L	1	J	EPA 624	11/22/17	11/23/17 1:15	EEH
Toluene	ND	1.0	0.17	µg/L	1		EPA 624	11/22/17	11/23/17 1:15	EEH
1,1,1-Trichloroethane	ND	2.0	0.13	µg/L	1		EPA 624	11/22/17	11/23/17 1:15	EEH
1,1,2-Trichloroethane	ND	2.0	0.24	µg/L	1		EPA 624	11/22/17	11/23/17 1:15	EEH
Trichloroethylene	2.5	2.0	0.20	µg/L	1		EPA 624	11/22/17	11/23/17 1:15	EEH
Vinyl Chloride	ND	2.0	0.13	µg/L	1		EPA 624	11/22/17	11/23/17 1:15	EEH
m+p Xylene	ND	2.0	0.26	µg/L	1		EPA 624	11/22/17	11/23/17 1:15	EEH
o-Xylene	ND	2.0	0.13	µg/L	1		EPA 624	11/22/17	11/23/17 1:15	EEH
Surrogates	% Recovery		Recovery Limits		Flag/Qual					
1,2-Dichloroethane-d4	96.6		70-130				11/23/17 1:15			
Toluene-d8	92.8		70-130				11/23/17 1:15			
4-Bromofluorobenzene	90.6		70-130				11/23/17 1:15			

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: South Boston, MA

Sample Description:

Work Order: 17K1132

Date Received: 11/20/2017

Field Sample #: LE-TMW1

Sampled: 11/20/2017 13:30

Sample ID: 17K1132-01

Sample Matrix: Ground Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Benzo(a)anthracene	0.41	0.047	0.047	µg/L	1		SW-846 8270D	11/22/17	11/26/17 16:11	BGL
Benzo(a)pyrene	0.43	0.095	0.095	µg/L	1		SW-846 8270D	11/22/17	11/26/17 16:11	BGL
Benzo(b)fluoranthene	0.52	0.047	0.047	µg/L	1		SW-846 8270D	11/22/17	11/26/17 16:11	BGL
Benzo(k)fluoranthene	0.20	0.19	0.19	µg/L	1		SW-846 8270D	11/22/17	11/26/17 16:11	BGL
Bis(2-Ethylhexyl)phthalate	0.47	0.95	0.095	µg/L	1	J	SW-846 8270D	11/22/17	11/26/17 16:11	BGL
Chrysene	0.40	0.19	0.19	µg/L	1		SW-846 8270D	11/22/17	11/26/17 16:11	BGL
Dibenz(a,h)anthracene	ND	0.19	0.19	µg/L	1		SW-846 8270D	11/22/17	11/26/17 16:11	BGL
Indeno(1,2,3-cd)pyrene	0.26	0.19	0.19	µg/L	1		SW-846 8270D	11/22/17	11/26/17 16:11	BGL
Surrogates	% Recovery		Recovery Limits		Flag/Qual					
Nitrobenzene-d5	82.6		30-130							
2-Fluorobiphenyl	78.8		30-130							
p-Terphenyl-d14	72.6		30-130							

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: South Boston, MA

Sample Description:

Work Order: 17K1132

Date Received: 11/20/2017

Field Sample #: LE-TMW1

Sampled: 11/20/2017 13:30

Sample ID: 17K1132-01

Sample Matrix: Ground Water

Semivolatile Organic Compounds by - GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	4.7	µg/L	1		EPA 625	11/22/17	11/26/17 14:02	BGL
Acenaphthylene	ND	4.7	µg/L	1		EPA 625	11/22/17	11/26/17 14:02	BGL
Anthracene	ND	4.7	µg/L	1		EPA 625	11/22/17	11/26/17 14:02	BGL
Benzidine	ND	19	µg/L	1	V-04	EPA 625	11/22/17	11/26/17 14:02	BGL
Benzo(g,h,i)perylene	ND	4.7	µg/L	1	V-05	EPA 625	11/22/17	11/26/17 14:02	BGL
4-Bromophenylphenylether	ND	9.5	µg/L	1		EPA 625	11/22/17	11/26/17 14:02	BGL
Butylbenzylphthalate	ND	9.5	µg/L	1		EPA 625	11/22/17	11/26/17 14:02	BGL
4-Chloro-3-methylphenol	ND	9.5	µg/L	1		EPA 625	11/22/17	11/26/17 14:02	BGL
Bis(2-chloroethyl)ether	ND	9.5	µg/L	1		EPA 625	11/22/17	11/26/17 14:02	BGL
Bis(2-chloroisopropyl)ether	ND	9.5	µg/L	1		EPA 625	11/22/17	11/26/17 14:02	BGL
2-Chloronaphthalene	ND	9.5	µg/L	1		EPA 625	11/22/17	11/26/17 14:02	BGL
2-Chlorophenol	ND	9.5	µg/L	1		EPA 625	11/22/17	11/26/17 14:02	BGL
4-Chlorophenylphenylether	ND	9.5	µg/L	1		EPA 625	11/22/17	11/26/17 14:02	BGL
Di-n-butylphthalate	ND	9.5	µg/L	1		EPA 625	11/22/17	11/26/17 14:02	BGL
1,3-Dichlorobenzene	ND	4.7	µg/L	1		EPA 625	11/22/17	11/26/17 14:02	BGL
1,4-Dichlorobenzene	ND	4.7	µg/L	1		EPA 625	11/22/17	11/26/17 14:02	BGL
1,2-Dichlorobenzene	ND	4.7	µg/L	1		EPA 625	11/22/17	11/26/17 14:02	BGL
3,3-Dichlorobenzidine	ND	9.5	µg/L	1		EPA 625	11/22/17	11/26/17 14:02	BGL
2,4-Dichlorophenol	ND	9.5	µg/L	1		EPA 625	11/22/17	11/26/17 14:02	BGL
Diethylphthalate	ND	9.5	µg/L	1		EPA 625	11/22/17	11/26/17 14:02	BGL
2,4-Dimethylphenol	ND	9.5	µg/L	1		EPA 625	11/22/17	11/26/17 14:02	BGL
Dimethylphthalate	ND	9.5	µg/L	1		EPA 625	11/22/17	11/26/17 14:02	BGL
4,6-Dinitro-2-methylphenol	ND	9.5	µg/L	1		EPA 625	11/22/17	11/26/17 14:02	BGL
2,4-Dinitrophenol	ND	9.5	µg/L	1	V-19	EPA 625	11/22/17	11/26/17 14:02	BGL
2,4-Dinitrotoluene	ND	9.5	µg/L	1		EPA 625	11/22/17	11/26/17 14:02	BGL
2,6-Dinitrotoluene	ND	9.5	µg/L	1		EPA 625	11/22/17	11/26/17 14:02	BGL
Di-n-octylphthalate	ND	9.5	µg/L	1		EPA 625	11/22/17	11/26/17 14:02	BGL
1,2-Diphenylhydrazine (as Azobenzene)	ND	9.5	µg/L	1		EPA 625	11/22/17	11/26/17 14:02	BGL
Bis(2-Ethylhexyl)phthalate	ND	9.5	µg/L	1		EPA 625	11/22/17	11/26/17 14:02	BGL
Fluoranthene	ND	4.7	µg/L	1		EPA 625	11/22/17	11/26/17 14:02	BGL
Fluorene	ND	4.7	µg/L	1		EPA 625	11/22/17	11/26/17 14:02	BGL
Hexachlorobenzene	ND	9.5	µg/L	1		EPA 625	11/22/17	11/26/17 14:02	BGL
Hexachlorobutadiene	ND	9.5	µg/L	1		EPA 625	11/22/17	11/26/17 14:02	BGL
Hexachlorocyclopentadiene	ND	9.5	µg/L	1		EPA 625	11/22/17	11/26/17 14:02	BGL
Hexachloroethane	ND	9.5	µg/L	1		EPA 625	11/22/17	11/26/17 14:02	BGL
Isophorone	ND	9.5	µg/L	1		EPA 625	11/22/17	11/26/17 14:02	BGL
Naphthalene	ND	4.7	µg/L	1		EPA 625	11/22/17	11/26/17 14:02	BGL
Nitrobenzene	ND	9.5	µg/L	1		EPA 625	11/22/17	11/26/17 14:02	BGL
2-Nitrophenol	ND	9.5	µg/L	1		EPA 625	11/22/17	11/26/17 14:02	BGL
4-Nitrophenol	ND	9.5	µg/L	1	V-05	EPA 625	11/22/17	11/26/17 14:02	BGL
N-Nitrosodimethylamine	ND	9.5	µg/L	1		EPA 625	11/22/17	11/26/17 14:02	BGL
N-Nitrosodiphenylamine	ND	9.5	µg/L	1		EPA 625	11/22/17	11/26/17 14:02	BGL
N-Nitrosodi-n-propylamine	ND	9.5	µg/L	1		EPA 625	11/22/17	11/26/17 14:02	BGL
Pentachlorophenol	ND	0.95	µg/L	1		EPA 625	11/22/17	11/26/17 14:27	BGL

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: South Boston, MA

Sample Description:

Work Order: 17K1132

Date Received: 11/20/2017

Field Sample #: LE-TMW1

Sampled: 11/20/2017 13:30

Sample ID: 17K1132-01

Sample Matrix: Ground Water

Semivolatile Organic Compounds by - GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylnaphthalene	ND	4.7	µg/L	1		EPA 625	11/22/17	11/26/17 14:02	BGL
Phenanthrene	ND	4.7	µg/L	1		EPA 625	11/22/17	11/26/17 14:02	BGL
2-Methylphenol	ND	9.5	µg/L	1		EPA 625	11/22/17	11/26/17 14:02	BGL
Phenol	ND	9.5	µg/L	1		EPA 625	11/22/17	11/26/17 14:02	BGL
3/4-Methylphenol	ND	9.5	µg/L	1		EPA 625	11/22/17	11/26/17 14:02	BGL
Pyrene	ND	4.7	µg/L	1		EPA 625	11/22/17	11/26/17 14:02	BGL
1,2,4-Trichlorobenzene	ND	4.7	µg/L	1		EPA 625	11/22/17	11/26/17 14:02	BGL
2,4,6-Trichlorophenol	ND	9.5	µg/L	1		EPA 625	11/22/17	11/26/17 14:02	BGL
Surrogates	% Recovery	Recovery Limits			Flag/Qual				
2-Fluorophenol	53.2	15-110						11/26/17 14:02	
2-Fluorophenol	41.1	15-110						11/26/17 14:27	
Phenol-d6	33.1	15-110						11/26/17 14:02	
Phenol-d6	26.0	15-110						11/26/17 14:27	
Nitrobenzene-d5	68.2	30-130						11/26/17 14:27	
Nitrobenzene-d5	91.7	30-130						11/26/17 14:02	
2-Fluorobiphenyl	104	30-130						11/26/17 14:02	
2-Fluorobiphenyl	83.4	30-130						11/26/17 14:27	
2,4,6-Tribromophenol	116	*	15-110		S-07			11/26/17 14:02	
2,4,6-Tribromophenol	110		15-110		S-07			11/26/17 14:27	
p-Terphenyl-d14	108		30-130					11/26/17 14:02	
p-Terphenyl-d14	91.8		30-130					11/26/17 14:27	

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Project Location: South Boston, MA

Sample Description:

Work Order: 17K1132

Date Received: 11/20/2017

Field Sample #: LE-TMW1

Sampled: 11/20/2017 13:30

Sample ID: 17K1132-01

Sample Matrix: Ground Water

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.10	0.058	µg/L	1		EPA 608	11/21/17	11/22/17 15:14	TG
Aroclor-1221 [1]	ND	0.10	0.063	µg/L	1		EPA 608	11/21/17	11/22/17 15:14	TG
Aroclor-1232 [1]	ND	0.10	0.039	µg/L	1		EPA 608	11/21/17	11/22/17 15:14	TG
Aroclor-1242 [1]	ND	0.10	0.055	µg/L	1		EPA 608	11/21/17	11/22/17 15:14	TG
Aroclor-1248 [1]	ND	0.10	0.066	µg/L	1		EPA 608	11/21/17	11/22/17 15:14	TG
Aroclor-1254 [1]	ND	0.10	0.072	µg/L	1		EPA 608	11/21/17	11/22/17 15:14	TG
Aroclor-1260 [1]	ND	0.10	0.074	µg/L	1		EPA 608	11/21/17	11/22/17 15:14	TG
Surrogates	% Recovery		Recovery Limits		Flag/Qual					
Decachlorobiphenyl [1]	72.6		30-150				11/22/17 15:14			
Decachlorobiphenyl [2]	83.9		30-150				11/22/17 15:14			
Tetrachloro-m-xylene [1]	75.2		30-150				11/22/17 15:14			
Tetrachloro-m-xylene [2]	78.6		30-150				11/22/17 15:14			

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Project Location: South Boston, MA

Sample Description:

Work Order: 17K1132

Date Received: 11/20/2017

Field Sample #: LE-TMW1

Sampled: 11/20/2017 13:30

Sample ID: 17K1132-01

Sample Matrix: Ground Water

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	2.8	1.0		µg/L	1		EPA 200.8	11/21/17	11/27/17 7:43	MJH
Arsenic	23	1.0		µg/L	1		EPA 200.8	11/21/17	11/27/17 7:43	MJH
Cadmium	ND	0.20		µg/L	1		EPA 200.8	11/21/17	11/27/17 7:43	MJH
Chromium	ND	10		µg/L	1		EPA 200.8	11/21/17	11/27/17 7:43	MJH
Chromium, Trivalent	ND	0.010		mg/L	1		Tri Chrome Calc.	11/21/17	11/27/17 8:23	MJH
Copper	9.3	1.0		µg/L	1		EPA 200.8	11/21/17	11/27/17 7:43	MJH
Iron	0.61	0.050		mg/L	1		EPA 200.7	11/21/17	11/28/17 15:48	QNW
Lead	14	0.50		µg/L	1		EPA 200.8	11/21/17	11/27/17 7:43	MJH
Mercury	0.00013	0.00010		mg/L	1		EPA 245.1	11/21/17	11/22/17 10:20	EJB
Nickel	11	5.0		µg/L	1		EPA 200.8	11/21/17	11/27/17 7:43	MJH
Selenium	3.2	5.0	2.1	µg/L	1	J	EPA 200.8	11/21/17	11/27/17 7:43	MJH
Silver	ND	0.20		µg/L	1		EPA 200.8	11/21/17	11/27/17 7:43	MJH
Zinc	42	20		µg/L	1		EPA 200.8	11/21/17	11/27/17 7:43	MJH

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Project Location: South Boston, MA

Sample Description:

Work Order: 17K1132

Date Received: 11/20/2017

Field Sample #: LE-TMW1

Sampled: 11/20/2017 13:30

Sample ID: 17K1132-01

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Chlorine, Residual	ND	0.020	mg/L	1		SM21-22 4500 CL G	11/21/17	11/21/17 11:35	IS
Hexavalent Chromium	ND	0.0040	mg/L	1		SM21-22 3500 Cr B	11/21/17	11/21/17 10:45	IS
Total Suspended Solids	22	5.0	mg/L	1		SM21-22 2540D	11/21/17	11/21/17 14:45	LL
Silica Gel Treated HEM (SGT-HEM)	ND	1.6	mg/L	1		EPA 1664B	11/22/17	11/22/17 10:30	LL

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Project Location: South Boston, MA

Sample Description:

Work Order: 17K1132

Date Received: 11/20/2017

Field Sample #: LE-TMW1

Sampled: 11/20/2017 13:30

Sample ID: 17K1132-01

Sample Matrix: Ground Water

Drinking Water Organics EPA 504.1

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
1,2-Dibromoethane (EDB) (1)	ND	0.021	µg/L	1		EPA 504.1	11/22/17	11/22/17 19:54	JMB

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Project Location: South Boston, MA

Sample Description:

Work Order: 17K1132

Date Received: 11/20/2017

Field Sample #: LE-TMW1

Sampled: 11/20/2017 13:30

Sample ID: 17K1132-01

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Ammonia as N	0.075	0.075	mg/L	1		SM19-22 4500 NH3 C	11/28/17	0:00	PHE
Cyanide	0.006	0.005	mg/L	1		SM21-22 4500 CN E	11/28/17	0:00	PHE

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Project Location: South Boston, MA

Sample Description:

Work Order: 17K1132

Date Received: 11/20/2017

Field Sample #: LE-TMW1

Sampled: 11/20/2017 13:30

Sample ID: 17K1132-01

Sample Matrix: Ground Water

Semivolatile Organic Compounds by 1671A

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Ethanol	ND	2000	ug/L	1		1671A		11/27/17 0:00	TAN

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Project Location: South Boston, MA

Sample Description:

Work Order: 17K1132

Date Received: 11/20/2017

Field Sample #: LE-TMW1

Sampled: 11/20/2017 13:30

Sample ID: 17K1132-01

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Chloride	807	50	mg/L	50		EPA 300.0		11/21/17 0:00	EURO

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Sample Extraction Data**EPA 1664B**

Lab Number [Field ID]	Batch	Initial [mL]	Date	
17K1132-01 [LE-TMW1]	B191630	850	11/22/17	

Prep Method: EPA 200.7-EPA 200.7

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
17K1132-01 [LE-TMW1]	B191512	50.0	50.0	11/21/17

Prep Method: EPA 200.8-EPA 200.8

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
17K1132-01 [LE-TMW1]	B191513	50.0	50.0	11/21/17

Prep Method: EPA 245.1-EPA 245.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
17K1132-01 [LE-TMW1]	B191588	6.00	6.00	11/21/17

Prep Method: EPA 504 water-EPA 504.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
17K1132-01 [LE-TMW1]	B191652	32.7	35.0	11/22/17

Prep Method: SW-846 3510C-EPA 608

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
17K1132-01 [LE-TMW1]	B191552	980	5.00	11/21/17

Prep Method: SW-846 5030B-EPA 624

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
17K1132-01 [LE-TMW1]	B191645	5	5.00	11/22/17

Prep Method: SW-846 3510C-EPA 625

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
17K1132-01 [LE-TMW1]	B191597	950	0.900	11/22/17
17K1132-01RE1 [LE-TMW1]	B191597	950	0.180	11/22/17

SM21-22 2540D

Lab Number [Field ID]	Batch	Initial [mL]	Date	
17K1132-01 [LE-TMW1]	B191507	100	11/21/17	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332**Sample Extraction Data****SM21-22 3500 Cr B**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
17K1132-01 [LE-TMW1]	B191562	50.0	50.0	11/21/17

SM21-22 4500 CL G

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
17K1132-01 [LE-TMW1]	B191561	100	100	11/21/17

Prep Method: SW-846 3510C-SW-846 8270D

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
17K1132-01 [LE-TMW1]	B191804	950	0.900	11/22/17

Prep Method: SW-846 3005A-Tri Chrome Calc.

Lab Number [Field ID]	Batch	Initial [mL]	Date
17K1132-01 [LE-TMW1]	B191514	1.00	11/21/17

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B191645 - SW-846 5030B

Blank (B191645-BLK1)

Prepared & Analyzed: 11/22/17

Acetone	ND	50	µg/L							
tert-Amyl Methyl Ether (TAME)	ND	0.50	µg/L							
Benzene	ND	1.0	µg/L							
tert-Butyl Alcohol (TBA)	ND	20	µg/L							
Carbon Tetrachloride	ND	2.0	µg/L							
1,2-Dichlorobenzene	ND	2.0	µg/L							
1,3-Dichlorobenzene	ND	2.0	µg/L							
1,4-Dichlorobenzene	ND	2.0	µg/L							
1,2-Dichloroethane	ND	2.0	µg/L							
cis-1,2-Dichloroethylene	ND	1.0	µg/L							
1,1-Dichloroethane	ND	2.0	µg/L							
1,1-Dichloroethylene	ND	2.0	µg/L							
1,4-Dioxane	ND	50	µg/L							
Ethylbenzene	ND	2.0	µg/L							
Methyl tert-Butyl Ether (MTBE)	ND	2.0	µg/L							
Methylene Chloride	ND	5.0	µg/L							
Tetrachloroethylene	ND	2.0	µg/L							
Toluene	ND	1.0	µg/L							
1,1,1-Trichloroethane	ND	2.0	µg/L							
1,1,2-Trichloroethane	ND	2.0	µg/L							
Trichloroethylene	ND	2.0	µg/L							
Vinyl Chloride	ND	2.0	µg/L							
m+p Xylene	ND	2.0	µg/L							
o-Xylene	ND	2.0	µg/L							
Surrogate: 1,2-Dichloroethane-d4	24.8		µg/L	25.0		99.3	70-130			
Surrogate: Toluene-d8	23.2		µg/L	25.0		92.8	70-130			
Surrogate: 4-Bromofluorobenzene	22.0		µg/L	25.0		88.1	70-130			

LCS (B191645-BS1)

Prepared & Analyzed: 11/22/17

Acetone	77.0	50	µg/L	100		77.0	70-160			†
tert-Amyl Methyl Ether (TAME)	8.21	0.50	µg/L	10.0		82.1	70-130			
Benzene	9.83	1.0	µg/L	10.0		98.3	37-151			
tert-Butyl Alcohol (TBA)	75.6	20	µg/L	100		75.6	40-160			†
Carbon Tetrachloride	9.65	2.0	µg/L	10.0		96.5	70-140			
1,2-Dichlorobenzene	9.77	2.0	µg/L	10.0		97.7	18-190			
1,3-Dichlorobenzene	10.3	2.0	µg/L	10.0		103	59-156			
1,4-Dichlorobenzene	9.49	2.0	µg/L	10.0		94.9	18-190			
1,2-Dichloroethane	9.63	2.0	µg/L	10.0		96.3	49-155			
cis-1,2-Dichloroethylene	9.50	1.0	µg/L	10.0		95.0	70-130			
1,1-Dichloroethane	9.19	2.0	µg/L	10.0		91.9	59-155			
1,1-Dichloroethylene	9.25	2.0	µg/L	10.0		92.5	20-234			
1,4-Dioxane	131	50	µg/L	100		131	* 40-130		L-01	†
Ethylbenzene	9.62	2.0	µg/L	10.0		96.2	37-162			
Methyl tert-Butyl Ether (MTBE)	9.78	2.0	µg/L	10.0		97.8	70-130			
Methylene Chloride	9.33	5.0	µg/L	10.0		93.3	50-221			
Tetrachloroethylene	10.9	2.0	µg/L	10.0		109	64-148			
Toluene	10.2	1.0	µg/L	10.0		102	47-150			
1,1,1-Trichloroethane	9.34	2.0	µg/L	10.0		93.4	52-162			
1,1,2-Trichloroethane	10.9	2.0	µg/L	10.0		109	52-150			
Trichloroethylene	9.80	2.0	µg/L	10.0		98.0	71-157			
Vinyl Chloride	6.92	2.0	µg/L	10.0		69.2	20-251			
m+p Xylene	20.3	2.0	µg/L	20.0		101	70-130			

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QUALITY CONTROL
Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B191645 - SW-846 5030B
LCS (B191645-BS1)

Prepared & Analyzed: 11/22/17

o-Xylene	9.34	2.0	µg/L	10.0		93.4	70-130			
Surrogate: 1,2-Dichloroethane-d4	23.8		µg/L	25.0		95.2	70-130			
Surrogate: Toluene-d8	26.0		µg/L	25.0		104	70-130			
Surrogate: 4-Bromofluorobenzene	25.7		µg/L	25.0		103	70-130			

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QUALITY CONTROL
Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B191804 - SW-846 3510C										
Blank (B191804-BLK1)										
Prepared: 11/21/17 Analyzed: 11/26/17										
Benzo(a)anthracene	ND	0.050	µg/L							
Benzo(a)pyrene	ND	0.10	µg/L							
Benzo(b)fluoranthene	ND	0.050	µg/L							
Benzo(k)fluoranthene	ND	0.20	µg/L							
Bis(2-Ethylhexyl)phthalate	0.23	1.0	µg/L							J
Chrysene	ND	0.20	µg/L							
Dibenz(a,h)anthracene	ND	0.20	µg/L							
Indeno(1,2,3-cd)pyrene	ND	0.20	µg/L							
Surrogate: Nitrobenzene-d5	68.8		µg/L	100		68.8	30-130			
Surrogate: 2-Fluorobiphenyl	71.0		µg/L	100		71.0	30-130			
Surrogate: p-Terphenyl-d14	67.2		µg/L	100		67.2	30-130			
LCS (B191804-BS1)										
Prepared: 11/21/17 Analyzed: 11/26/17										
Benzo(a)anthracene	69.3	1.2	µg/L	100		69.3	40-140			
Benzo(a)pyrene	79.6	2.5	µg/L	100		79.6	40-140			
Benzo(b)fluoranthene	81.9	1.2	µg/L	100		81.9	40-140			
Benzo(k)fluoranthene	79.3	5.0	µg/L	100		79.3	40-140			
Bis(2-Ethylhexyl)phthalate	96.0	25	µg/L	100		96.0	40-140			
Chrysene	68.3	5.0	µg/L	100		68.3	40-140			
Dibenz(a,h)anthracene	73.6	5.0	µg/L	100		73.6	40-140			
Indeno(1,2,3-cd)pyrene	73.0	5.0	µg/L	100		73.0	40-140			
Surrogate: Nitrobenzene-d5	70.6		µg/L	100		70.6	30-130			
Surrogate: 2-Fluorobiphenyl	71.3		µg/L	100		71.3	30-130			
Surrogate: p-Terphenyl-d14	70.2		µg/L	100		70.2	30-130			
LCS Dup (B191804-BSD1)										
Prepared: 11/21/17 Analyzed: 11/26/17										
Benzo(a)anthracene	74.7	1.2	µg/L	100		74.7	40-140	7.53	20	
Benzo(a)pyrene	85.8	2.5	µg/L	100		85.8	40-140	7.62	20	
Benzo(b)fluoranthene	87.8	1.2	µg/L	100		87.8	40-140	6.89	20	
Benzo(k)fluoranthene	85.3	5.0	µg/L	100		85.3	40-140	7.32	20	
Bis(2-Ethylhexyl)phthalate	102	25	µg/L	100		102	40-140	5.84	20	
Chrysene	73.6	5.0	µg/L	100		73.6	40-140	7.54	20	
Dibenz(a,h)anthracene	78.4	5.0	µg/L	100		78.4	40-140	6.38	20	
Indeno(1,2,3-cd)pyrene	77.8	5.0	µg/L	100		77.8	40-140	6.36	50	‡
Surrogate: Nitrobenzene-d5	74.8		µg/L	100		74.8	30-130			
Surrogate: 2-Fluorobiphenyl	78.6		µg/L	100		78.6	30-130			
Surrogate: p-Terphenyl-d14	70.8		µg/L	100		70.8	30-130			

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QUALITY CONTROL
Semivolatile Organic Compounds by - GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B191597 - SW-846 3510C										
Blank (B191597-BLK1)				Prepared: 11/21/17 Analyzed: 11/26/17						
Acenaphthene	ND	5.0	µg/L							
Acenaphthylene	ND	5.0	µg/L							
Anthracene	ND	5.0	µg/L							
Benzidine	ND	20	µg/L							V-04
Benzo(g,h,i)perylene	ND	5.0	µg/L							V-05
4-Bromophenylphenylether	ND	10	µg/L							
Butylbenzylphthalate	ND	10	µg/L							
4-Chloro-3-methylphenol	ND	10	µg/L							
Bis(2-chloroethyl)ether	ND	10	µg/L							
Bis(2-chloroisopropyl)ether	ND	10	µg/L							
2-Chloronaphthalene	ND	10	µg/L							
2-Chlorophenol	ND	10	µg/L							
4-Chlorophenylphenylether	ND	10	µg/L							
Di-n-butylphthalate	ND	10	µg/L							
1,3-Dichlorobenzene	ND	5.0	µg/L							
1,4-Dichlorobenzene	ND	5.0	µg/L							
1,2-Dichlorobenzene	ND	5.0	µg/L							
3,3-Dichlorobenzidine	ND	10	µg/L							
2,4-Dichlorophenol	ND	10	µg/L							
Diethylphthalate	ND	10	µg/L							
2,4-Dimethylphenol	ND	10	µg/L							
Dimethylphthalate	ND	10	µg/L							
4,6-Dinitro-2-methylphenol	ND	10	µg/L							
2,4-Dinitrophenol	ND	10	µg/L							V-19
2,4-Dinitrotoluene	ND	10	µg/L							
2,6-Dinitrotoluene	ND	10	µg/L							
Di-n-octylphthalate	ND	10	µg/L							
1,2-Diphenylhydrazine (as Azobenzene)	ND	10	µg/L							
Bis(2-Ethylhexyl)phthalate	ND	10	µg/L							
Fluoranthene	ND	5.0	µg/L							
Fluorene	ND	5.0	µg/L							
Hexachlorobenzene	ND	10	µg/L							
Hexachlorobutadiene	ND	10	µg/L							
Hexachlorocyclopentadiene	ND	10	µg/L							
Hexachloroethane	ND	10	µg/L							
Isophorone	ND	10	µg/L							
Naphthalene	ND	5.0	µg/L							
Nitrobenzene	ND	10	µg/L							
2-Nitrophenol	ND	10	µg/L							
4-Nitrophenol	ND	10	µg/L							V-05
N-Nitrosodimethylamine	ND	10	µg/L							
N-Nitrosodiphenylamine	ND	10	µg/L							
N-Nitrosodi-n-propylamine	ND	10	µg/L							
Pentachlorophenol	ND	10	µg/L							
2-Methylnaphthalene	ND	5.0	µg/L							
Phenanthrene	ND	5.0	µg/L							
2-Methylphenol	ND	10	µg/L							
Phenol	ND	10	µg/L							
3/4-Methylphenol	ND	10	µg/L							
Pyrene	ND	5.0	µg/L							
1,2,4-Trichlorobenzene	ND	5.0	µg/L							
2,4,6-Trichlorophenol	ND	10	µg/L							

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QUALITY CONTROL
Semivolatile Organic Compounds by - GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B191597 - SW-846 3510C
Blank (B191597-BLK1)

Prepared: 11/21/17 Analyzed: 11/26/17

Surrogate: 2-Fluorophenol	95.6		µg/L	200		47.8	15-110			
Surrogate: Phenol-d6	62.0		µg/L	200		31.0	15-110			
Surrogate: Nitrobenzene-d5	84.7		µg/L	100		84.7	30-130			
Surrogate: 2-Fluorobiphenyl	94.5		µg/L	100		94.5	30-130			
Surrogate: 2,4,6-Tribromophenol	210		µg/L	200		105	15-110			
Surrogate: p-Terphenyl-d14	97.9		µg/L	100		97.9	30-130			

Blank (B191597-BLK2)

Prepared: 11/21/17 Analyzed: 11/26/17

Acenaphthene	ND	1.0	µg/L							
Acenaphthylene	ND	1.0	µg/L							
Anthracene	ND	1.0	µg/L							
Benzidine	ND	4.0	µg/L							V-04
Benzo(g,h,i)perylene	ND	1.0	µg/L							V-05
4-Bromophenylphenylether	ND	2.0	µg/L							
Butylbenzylphthalate	ND	2.0	µg/L							
4-Chloro-3-methylphenol	ND	2.0	µg/L							
Bis(2-chloroethyl)ether	ND	2.0	µg/L							
Bis(2-chloroisopropyl)ether	ND	2.0	µg/L							
2-Chloronaphthalene	ND	2.0	µg/L							
2-Chlorophenol	ND	2.0	µg/L							
4-Chlorophenylphenylether	ND	2.0	µg/L							
Di-n-butylphthalate	ND	2.0	µg/L							
1,3-Dichlorobenzene	ND	1.0	µg/L							
1,4-Dichlorobenzene	ND	1.0	µg/L							
1,2-Dichlorobenzene	ND	1.0	µg/L							
3,3-Dichlorobenzidine	ND	2.0	µg/L							
2,4-Dichlorophenol	ND	2.0	µg/L							
Diethylphthalate	ND	2.0	µg/L							
2,4-Dimethylphenol	ND	2.0	µg/L							
Dimethylphthalate	ND	2.0	µg/L							
4,6-Dinitro-2-methylphenol	ND	2.0	µg/L							
2,4-Dinitrophenol	ND	2.0	µg/L							V-19
2,4-Dinitrotoluene	ND	2.0	µg/L							
2,6-Dinitrotoluene	ND	2.0	µg/L							
Di-n-octylphthalate	ND	2.0	µg/L							
1,2-Diphenylhydrazine (as Azobenzene)	ND	2.0	µg/L							
Bis(2-Ethylhexyl)phthalate	ND	2.0	µg/L							
Fluoranthene	ND	1.0	µg/L							
Fluorene	ND	1.0	µg/L							
Hexachlorobenzene	ND	2.0	µg/L							
Hexachlorobutadiene	ND	2.0	µg/L							
Hexachlorocyclopentadiene	ND	2.0	µg/L							
Hexachloroethane	ND	2.0	µg/L							
Isophorone	ND	2.0	µg/L							
Naphthalene	ND	1.0	µg/L							
Nitrobenzene	ND	2.0	µg/L							
2-Nitrophenol	ND	2.0	µg/L							
4-Nitrophenol	ND	2.0	µg/L							V-05
N-Nitrosodimethylamine	ND	2.0	µg/L							
N-Nitrosodiphenylamine	ND	2.0	µg/L							
N-Nitrosodi-n-propylamine	ND	2.0	µg/L							
Pentachlorophenol	ND	1.0	µg/L							

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QUALITY CONTROL
Semivolatile Organic Compounds by - GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B191597 - SW-846 3510C										
Blank (B191597-BLK2)				Prepared: 11/21/17 Analyzed: 11/26/17						
2-Methylnaphthalene	ND	1.0	µg/L							
Phenanthrene	ND	1.0	µg/L							
2-Methylphenol	ND	2.0	µg/L							
Phenol	ND	2.0	µg/L							
3/4-Methylphenol	ND	2.0	µg/L							
Pyrene	ND	1.0	µg/L							
1,2,4-Trichlorobenzene	ND	1.0	µg/L							
2,4,6-Trichlorophenol	ND	2.0	µg/L							
Surrogate: 2-Fluorophenol	69.9		µg/L	200		34.9	15-110			
Surrogate: Phenol-d6	45.4		µg/L	200		22.7	15-110			
Surrogate: Nitrobenzene-d5	63.9		µg/L	100		63.9	30-130			
Surrogate: 2-Fluorobiphenyl	79.8		µg/L	100		79.8	30-130			
Surrogate: 2,4,6-Tribromophenol	208		µg/L	200		104	15-110			
Surrogate: p-Terphenyl-d14	89.2		µg/L	100		89.2	30-130			
LCS (B191597-BS1)				Prepared: 11/21/17 Analyzed: 11/26/17						
Acenaphthene	70.8	5.0	µg/L	100		70.8	47-145			
Acenaphthylene	68.3	5.0	µg/L	100		68.3	33-145			
Anthracene	73.8	5.0	µg/L	100		73.8	27-133			
Benzidine	46.1	20	µg/L	100		46.1	40-140			V-04
Benzo(g,h,i)perylene	71.2	5.0	µg/L	100		71.2	1-219			V-05
4-Bromophenylphenylether	89.4	10	µg/L	100		89.4	53-127			
Butylbenzylphthalate	83.4	10	µg/L	100		83.4	1-152			
4-Chloro-3-methylphenol	72.7	10	µg/L	100		72.7	22-147			
Bis(2-chloroethyl)ether	80.2	10	µg/L	100		80.2	12-158			
Bis(2-chloroisopropyl)ether	79.4	10	µg/L	100		79.4	36-166			
2-Chloronaphthalene	68.2	10	µg/L	100		68.2	60-118			
2-Chlorophenol	67.1	10	µg/L	100		67.1	23-134			
4-Chlorophenylphenylether	81.7	10	µg/L	100		81.7	25-158			
Di-n-butylphthalate	82.1	10	µg/L	100		82.1	1-118			
1,3-Dichlorobenzene	66.7	5.0	µg/L	100		66.7	1-172			
1,4-Dichlorobenzene	66.6	5.0	µg/L	100		66.6	20-124			
1,2-Dichlorobenzene	67.7	5.0	µg/L	100		67.7	32-129			
3,3-Dichlorobenzidine	78.2	10	µg/L	100		78.2	1-262			
2,4-Dichlorophenol	76.3	10	µg/L	100		76.3	39-135			
Diethylphthalate	81.6	10	µg/L	100		81.6	1-114			
2,4-Dimethylphenol	73.4	10	µg/L	100		73.4	32-119			
Dimethylphthalate	81.4	10	µg/L	100		81.4	1-112			
4,6-Dinitro-2-methylphenol	70.7	10	µg/L	100		70.7	1-181			
2,4-Dinitrophenol	69.8	10	µg/L	100		69.8	1-191			V-19
2,4-Dinitrotoluene	82.0	10	µg/L	100		82.0	39-139			
2,6-Dinitrotoluene	84.2	10	µg/L	100		84.2	50-158			
Di-n-octylphthalate	80.3	10	µg/L	100		80.3	4-146			
1,2-Diphenylhydrazine (as Azobenzene)	77.4	10	µg/L	100		77.4	40-140			
Bis(2-Ethylhexyl)phthalate	80.7	10	µg/L	100		80.7	8-158			
Fluoranthene	75.4	5.0	µg/L	100		75.4	26-137			
Fluorene	70.5	5.0	µg/L	100		70.5	59-121			
Hexachlorobenzene	86.6	10	µg/L	100		86.6	1-152			
Hexachlorobutadiene	81.7	10	µg/L	100		81.7	24-116			
Hexachlorocyclopentadiene	70.2	10	µg/L	100		70.2	40-140			
Hexachloroethane	68.5	10	µg/L	100		68.5	40-113			
Isophorone	77.0	10	µg/L	100		77.0	21-196			

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QUALITY CONTROL
Semivolatile Organic Compounds by - GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B191597 - SW-846 3510C										
LCS (B191597-BS1)										
Prepared: 11/21/17 Analyzed: 11/26/17										
Naphthalene	67.0	5.0	µg/L	100		67.0	21-133			
Nitrobenzene	67.2	10	µg/L	100		67.2	35-180			
2-Nitrophenol	71.6	10	µg/L	100		71.6	29-182			
4-Nitrophenol	34.8	10	µg/L	100		34.8	1-132			V-05
N-Nitrosodimethylamine	42.6	10	µg/L	100		42.6	40-140			
N-Nitrosodiphenylamine	99.7	10	µg/L	100		99.7	40-140			
N-Nitrosodi-n-propylamine	66.4	10	µg/L	100		66.4	1-230			
Pentachlorophenol	79.5	10	µg/L	100		79.5	14-176			
2-Methylnaphthalene	72.6	5.0	µg/L	100		72.6	40-140			
Phenanthrene	73.2	5.0	µg/L	100		73.2	54-120			
2-Methylphenol	57.9	10	µg/L	100		57.9	30-130			
Phenol	33.1	10	µg/L	100		33.1	5-112			
3/4-Methylphenol	55.7	10	µg/L	100		55.7	30-130			
Pyrene	75.8	5.0	µg/L	100		75.8	52-115			
1,2,4-Trichlorobenzene	75.1	5.0	µg/L	100		75.1	44-142			
2,4,6-Trichlorophenol	79.9	10	µg/L	100		79.9	37-144			
Surrogate: 2-Fluorophenol	91.4		µg/L	200		45.7	15-110			
Surrogate: Phenol-d6	60.8		µg/L	200		30.4	15-110			
Surrogate: Nitrobenzene-d5	78.0		µg/L	100		78.0	30-130			
Surrogate: 2-Fluorobiphenyl	93.9		µg/L	100		93.9	30-130			
Surrogate: 2,4,6-Tribromophenol	195		µg/L	200		97.7	15-110			
Surrogate: p-Terphenyl-d14	94.3		µg/L	100		94.3	30-130			
LCS Dup (B191597-BSD1)										
Prepared: 11/21/17 Analyzed: 11/26/17										
Acenaphthene	70.6	5.0	µg/L	100		70.6	47-145	0.198		
Acenaphthylene	67.3	5.0	µg/L	100		67.3	33-145	1.42		
Anthracene	72.6	5.0	µg/L	100		72.6	27-133	1.58		
Benzidine	49.7	20	µg/L	100		49.7	40-140	7.51		V-04
Benzo(g,h,i)perylene	69.4	5.0	µg/L	100		69.4	1-219	2.46		V-05
4-Bromophenylphenylether	88.6	10	µg/L	100		88.6	53-127	0.809		
Butylbenzylphthalate	83.0	10	µg/L	100		83.0	1-152	0.589		
4-Chloro-3-methylphenol	72.2	10	µg/L	100		72.2	22-147	0.621		
Bis(2-chloroethyl)ether	80.7	10	µg/L	100		80.7	12-158	0.646		
Bis(2-chloroisopropyl)ether	81.3	10	µg/L	100		81.3	36-166	2.39		
2-Chloronaphthalene	68.9	10	µg/L	100		68.9	60-118	1.05		
2-Chlorophenol	66.5	10	µg/L	100		66.5	23-134	0.808		
4-Chlorophenylphenylether	80.0	10	µg/L	100		80.0	25-158	2.14		
Di-n-butylphthalate	80.5	10	µg/L	100		80.5	1-118	1.89		
1,3-Dichlorobenzene	67.3	5.0	µg/L	100		67.3	1-172	0.925		
1,4-Dichlorobenzene	68.1	5.0	µg/L	100		68.1	20-124	2.32		
1,2-Dichlorobenzene	68.9	5.0	µg/L	100		68.9	32-129	1.74		
3,3-Dichlorobenzidine	75.8	10	µg/L	100		75.8	1-262	3.03		
2,4-Dichlorophenol	74.4	10	µg/L	100		74.4	39-135	2.52		
Diethylphthalate	79.9	10	µg/L	100		79.9	1-114	2.14		
2,4-Dimethylphenol	73.7	10	µg/L	100		73.7	32-119	0.381		
Dimethylphthalate	80.7	10	µg/L	100		80.7	1-112	0.790		
4,6-Dinitro-2-methylphenol	70.9	10	µg/L	100		70.9	1-181	0.297		
2,4-Dinitrophenol	68.6	10	µg/L	100		68.6	1-191	1.70		V-19
2,4-Dinitrotoluene	81.9	10	µg/L	100		81.9	39-139	0.0854		
2,6-Dinitrotoluene	83.1	10	µg/L	100		83.1	50-158	1.27		
Di-n-octylphthalate	79.3	10	µg/L	100		79.3	4-146	1.32		
1,2-Diphenylhydrazine (as Azobenzene)	76.6	10	µg/L	100		76.6	40-140	1.04		

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QUALITY CONTROL
Semivolatile Organic Compounds by - GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B191597 - SW-846 3510C										
LCS Dup (B191597-BSD1)										
					Prepared: 11/21/17 Analyzed: 11/26/17					
Bis(2-Ethylhexyl)phthalate	80.9	10	µg/L	100		80.9	8-158	0.272		
Fluoranthene	73.9	5.0	µg/L	100		73.9	26-137	2.05		
Fluorene	70.4	5.0	µg/L	100		70.4	59-121	0.213		
Hexachlorobenzene	85.0	10	µg/L	100		85.0	1-152	1.88		
Hexachlorobutadiene	80.7	10	µg/L	100		80.7	24-116	1.28		
Hexachlorocyclopentadiene	74.0	10	µg/L	100		74.0	40-140	5.40		
Hexachloroethane	69.0	10	µg/L	100		69.0	40-113	0.654		
Isophorone	77.1	10	µg/L	100		77.1	21-196	0.104		
Naphthalene	66.2	5.0	µg/L	100		66.2	21-133	1.20		
Nitrobenzene	67.1	10	µg/L	100		67.1	35-180	0.149		
2-Nitrophenol	70.9	10	µg/L	100		70.9	29-182	0.927		
4-Nitrophenol	34.9	10	µg/L	100		34.9	1-132	0.172		V-05
N-Nitrosodimethylamine	43.8	10	µg/L	100		43.8	40-140	2.66		
N-Nitrosodiphenylamine	97.4	10	µg/L	100		97.4	40-140	2.29		
N-Nitrosodi-n-propylamine	66.5	10	µg/L	100		66.5	1-230	0.0903		
Pentachlorophenol	77.9	10	µg/L	100		77.9	14-176	1.97		
2-Methylnaphthalene	72.5	5.0	µg/L	100		72.5	40-140	0.179	20	
Phenanthrene	67.7	5.0	µg/L	100		67.7	54-120	7.85		
2-Methylphenol	58.3	10	µg/L	100		58.3	30-130	0.637	20	
Phenol	33.5	10	µg/L	100		33.5	5-112	1.29		
3/4-Methylphenol	56.5	10	µg/L	100		56.5	30-130	1.43	20	
Pyrene	74.5	5.0	µg/L	100		74.5	52-115	1.74		
1,2,4-Trichlorobenzene	74.3	5.0	µg/L	100		74.3	44-142	1.14		
2,4,6-Trichlorophenol	80.1	10	µg/L	100		80.1	37-144	0.238		
Surrogate: 2-Fluorophenol	90.7		µg/L	200		45.3	15-110			
Surrogate: Phenol-d6	60.0		µg/L	200		30.0	15-110			
Surrogate: Nitrobenzene-d5	76.6		µg/L	100		76.6	30-130			
Surrogate: 2-Fluorobiphenyl	92.2		µg/L	100		92.2	30-130			
Surrogate: 2,4,6-Tribromophenol	187		µg/L	200		93.6	15-110			
Surrogate: p-Terphenyl-d14	91.8		µg/L	100		91.8	30-130			

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QUALITY CONTROL
Polychlorinated Biphenyls By GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B191552 - SW-846 3510C										
Blank (B191552-BLK1)										
Prepared: 11/21/17 Analyzed: 11/22/17										
Aroclor-1016	ND	0.10	µg/L							
Aroclor-1016 [2C]	ND	0.10	µg/L							
Aroclor-1221	ND	0.10	µg/L							
Aroclor-1221 [2C]	ND	0.10	µg/L							
Aroclor-1232	ND	0.10	µg/L							
Aroclor-1232 [2C]	ND	0.10	µg/L							
Aroclor-1242	ND	0.10	µg/L							
Aroclor-1242 [2C]	ND	0.10	µg/L							
Aroclor-1248	ND	0.10	µg/L							
Aroclor-1248 [2C]	ND	0.10	µg/L							
Aroclor-1254	ND	0.10	µg/L							
Aroclor-1254 [2C]	ND	0.10	µg/L							
Aroclor-1260	ND	0.10	µg/L							
Aroclor-1260 [2C]	ND	0.10	µg/L							
Surrogate: Decachlorobiphenyl	1.84		µg/L	2.00		92.0	30-150			
Surrogate: Decachlorobiphenyl [2C]	1.97		µg/L	2.00		98.4	30-150			
Surrogate: Tetrachloro-m-xylene	1.59		µg/L	2.00		79.3	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	1.62		µg/L	2.00		80.8	30-150			
LCS (B191552-BS1)										
Prepared: 11/21/17 Analyzed: 11/22/17										
Aroclor-1016	0.55	0.20	µg/L	0.500		109	50-114			
Aroclor-1016 [2C]	0.54	0.20	µg/L	0.500		108	50-114			
Aroclor-1260	0.44	0.20	µg/L	0.500		87.0	8-127			
Aroclor-1260 [2C]	0.53	0.20	µg/L	0.500		106	8-127			V-06
Surrogate: Decachlorobiphenyl	1.67		µg/L	2.00		83.6	30-150			
Surrogate: Decachlorobiphenyl [2C]	1.88		µg/L	2.00		94.0	30-150			
Surrogate: Tetrachloro-m-xylene	1.44		µg/L	2.00		72.0	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	1.51		µg/L	2.00		75.7	30-150			
LCS Dup (B191552-BSD1)										
Prepared: 11/21/17 Analyzed: 11/22/17										
Aroclor-1016	0.55	0.20	µg/L	0.500		109	50-114	0.137		
Aroclor-1016 [2C]	0.54	0.20	µg/L	0.500		107	50-114	0.482		
Aroclor-1260	0.48	0.20	µg/L	0.500		95.5	8-127	9.28		
Aroclor-1260 [2C]	0.57	0.20	µg/L	0.500		115	8-127	7.78		V-06
Surrogate: Decachlorobiphenyl	1.79		µg/L	2.00		89.7	30-150			
Surrogate: Decachlorobiphenyl [2C]	2.05		µg/L	2.00		102	30-150			
Surrogate: Tetrachloro-m-xylene	1.53		µg/L	2.00		76.5	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	1.60		µg/L	2.00		79.8	30-150			

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QUALITY CONTROL
Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B191512 - EPA 200.7										
Blank (B191512-BLK1)				Prepared: 11/21/17 Analyzed: 11/28/17						
Iron	ND	0.050	mg/L							
LCS (B191512-BS1)				Prepared: 11/21/17 Analyzed: 11/28/17						
Iron	4.08	0.050	mg/L	4.00		102	85-115			
LCS Dup (B191512-BSD1)				Prepared: 11/21/17 Analyzed: 11/28/17						
Iron	4.13	0.050	mg/L	4.00		103	85-115	1.21	20	
Duplicate (B191512-DUP1)				Source: 17K1132-01		Prepared: 11/21/17 Analyzed: 11/28/17				
Iron	0.626	0.050	mg/L		0.615			1.81	20	
Matrix Spike (B191512-MS1)				Source: 17K1132-01		Prepared: 11/21/17 Analyzed: 11/28/17				
Iron	4.64	0.050	mg/L	4.00	0.615	101	70-130			
Batch B191513 - EPA 200.8										
Blank (B191513-BLK1)				Prepared: 11/21/17 Analyzed: 11/27/17						
Antimony	ND	1.0	µg/L							
Arsenic	ND	1.0	µg/L							
Cadmium	ND	0.20	µg/L							
Chromium	ND	10	µg/L							
Copper	ND	1.0	µg/L							
Lead	ND	0.50	µg/L							
Nickel	ND	5.0	µg/L							
Selenium	ND	5.0	µg/L							
Silver	ND	0.20	µg/L							
Zinc	ND	20	µg/L							
LCS (B191513-BS1)				Prepared: 11/21/17 Analyzed: 11/27/17						
Antimony	541	10	µg/L	500		108	85-115			
Arsenic	525	10	µg/L	500		105	85-115			
Cadmium	537	2.0	µg/L	500		107	85-115			
Chromium	509	100	µg/L	500		102	85-115			
Copper	993	10	µg/L	1000		99.3	85-115			
Lead	507	5.0	µg/L	500		101	85-115			
Nickel	494	50	µg/L	500		98.9	85-115			
Selenium	517	50	µg/L	500		103	85-115			
Silver	504	2.0	µg/L	500		101	85-115			
Zinc	1080	200	µg/L	1000		108	85-115			
LCS Dup (B191513-BSD1)				Prepared: 11/21/17 Analyzed: 11/27/17						
Antimony	549	10	µg/L	500		110	85-115	1.54	20	
Arsenic	539	10	µg/L	500		108	85-115	2.75	20	
Cadmium	535	2.0	µg/L	500		107	85-115	0.260	20	
Chromium	521	100	µg/L	500		104	85-115	2.21	20	
Copper	1000	10	µg/L	1000		100	85-115	0.934	20	
Lead	512	5.0	µg/L	500		102	85-115	0.943	20	
Nickel	498	50	µg/L	500		99.6	85-115	0.711	20	
Selenium	535	50	µg/L	500		107	85-115	3.33	20	
Silver	512	2.0	µg/L	500		102	85-115	1.70	20	
Zinc	1110	200	µg/L	1000		111	85-115	2.61	20	

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QUALITY CONTROL
Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B191513 - EPA 200.8

Duplicate (B191513-DUP1)		Source: 17K1132-01		Prepared: 11/21/17 Analyzed: 11/27/17						
Antimony	2.85	1.0	µg/L		2.81			1.56	20	
Arsenic	23.7	1.0	µg/L		23.1			2.94	20	
Cadmium	ND	0.20	µg/L		ND			NC	20	
Chromium	ND	10	µg/L		ND			NC	20	
Copper	9.55	1.0	µg/L		9.26			3.08	20	
Lead	13.9	0.50	µg/L		13.7			1.00	20	
Nickel	11.3	5.0	µg/L		11.1			2.05	20	
Selenium	3.67	5.0	µg/L		3.21			13.5	20	J
Silver	ND	0.20	µg/L		ND			NC	20	
Zinc	42.6	20	µg/L		41.9			1.71	20	

Matrix Spike (B191513-MS1)		Source: 17K1132-01		Prepared: 11/21/17 Analyzed: 11/27/17						
Antimony	561	10	µg/L	500	2.81	112	70-130			
Arsenic	572	10	µg/L	500	23.1	110	70-130			
Cadmium	512	2.0	µg/L	500	ND	102	70-130			
Chromium	520	100	µg/L	500	ND	104	70-130			
Copper	975	10	µg/L	1000	9.26	96.6	70-130			
Lead	539	5.0	µg/L	500	13.7	105	70-130			
Nickel	495	50	µg/L	500	11.1	96.7	70-130			
Selenium	518	50	µg/L	500	ND	104	70-130			
Silver	505	2.0	µg/L	500	ND	101	70-130			
Zinc	1060	200	µg/L	1000	ND	106	70-130			

Batch B191588 - EPA 245.1

Blank (B191588-BLK1)				Prepared: 11/21/17 Analyzed: 11/22/17						
Mercury	ND	0.00010	mg/L							
LCS (B191588-BS1)				Prepared: 11/21/17 Analyzed: 11/22/17						
Mercury	0.00197	0.00010	mg/L	0.00200	98.6		85-115			
LCS Dup (B191588-BSD1)				Prepared: 11/21/17 Analyzed: 11/22/17						
Mercury	0.00199	0.00010	mg/L	0.00200	99.4		85-115	0.808	20	

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QUALITY CONTROL
Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B191507 - SM21-22 2540D										
Blank (B191507-BLK1)				Prepared & Analyzed: 11/21/17						
Total Suspended Solids	ND	2.5	mg/L							
LCS (B191507-BS1)				Prepared & Analyzed: 11/21/17						
Total Suspended Solids	196	20	mg/L	200		98.0	66.7-117			
Batch B191561 - SM21-22 4500 CL G										
Blank (B191561-BLK1)				Prepared & Analyzed: 11/21/17						
Chlorine, Residual	ND	0.020	mg/L							
LCS (B191561-BS1)				Prepared & Analyzed: 11/21/17						
Chlorine, Residual	1.4	0.020	mg/L	1.30		110	82.5-130			
LCS Dup (B191561-BSD1)				Prepared & Analyzed: 11/21/17						
Chlorine, Residual	1.4	0.020	mg/L	1.30		110	82.5-130	0.00	6.2	
Duplicate (B191561-DUP1)				Source: 17K1132-01			Prepared & Analyzed: 11/21/17			
Chlorine, Residual	ND	0.020	mg/L		ND			NC	44.8	
Matrix Spike (B191561-MS1)				Source: 17K1132-01			Prepared & Analyzed: 11/21/17			
Chlorine, Residual	1.2	0.020	mg/L	10.0	ND	12.1	10-182			
Batch B191562 - SM21-22 3500 Cr B										
Blank (B191562-BLK1)				Prepared & Analyzed: 11/21/17						
Hexavalent Chromium	ND	0.0040	mg/L							
LCS (B191562-BS1)				Prepared & Analyzed: 11/21/17						
Hexavalent Chromium	0.10	0.0040	mg/L	0.100		104	86.6-115			
LCS Dup (B191562-BSD1)				Prepared & Analyzed: 11/21/17						
Hexavalent Chromium	0.11	0.0040	mg/L	0.100		107	86.6-115	2.60	6.61	
Matrix Spike (B191562-MS1)				Source: 17K1132-01			Prepared & Analyzed: 11/21/17			
Hexavalent Chromium	0.074	0.0040	mg/L	0.100	ND	74.1	23.5-142			
Matrix Spike Dup (B191562-MSD1)				Source: 17K1132-01			Prepared & Analyzed: 11/21/17			
Hexavalent Chromium	0.078	0.0040	mg/L	0.100	ND	78.2	23.5-142	5.42	7.59	
Batch B191630 - EPA 1664B										
Blank (B191630-BLK1)				Prepared & Analyzed: 11/22/17						
Silica Gel Treated HEM (SGT-HEM)	ND	1.4	mg/L							

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QUALITY CONTROL
Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B191630 - EPA 1664B										
LCS (B191630-BS1)				Prepared & Analyzed: 11/22/17						
Silica Gel Treated HEM (SGT-HEM)	12		mg/L	10.0		124	64-132			
Duplicate (B191630-DUP1)				Prepared & Analyzed: 11/22/17						
Silica Gel Treated HEM (SGT-HEM)	ND	1.6	mg/L		ND			NC	18	
Matrix Spike (B191630-MS1)				Prepared & Analyzed: 11/22/17						
Silica Gel Treated HEM (SGT-HEM)	74	14	mg/L	100	ND	74.0	64-132			

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QUALITY CONTROL
Drinking Water Organics EPA 504.1 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B191652 - EPA 504 water
Blank (B191652-BLK1)

Prepared & Analyzed: 11/22/17

1,2-Dibromoethane (EDB)	ND	0.021	µg/L							
1,2-Dibromoethane (EDB) [2C]	ND	0.021	µg/L							

LCS (B191652-BS1)

Prepared & Analyzed: 11/22/17

1,2-Dibromoethane (EDB)	0.163	0.021	µg/L	0.182		89.7	70-130			
1,2-Dibromoethane (EDB) [2C]	0.218	0.021	µg/L	0.182		120	70-130			

LCS Dup (B191652-BSD1)

Prepared & Analyzed: 11/22/17

1,2-Dibromoethane (EDB)	0.159	0.021	µg/L	0.180		88.0	70-130	2.79		
1,2-Dibromoethane (EDB) [2C]	0.161	0.021	µg/L	0.180		89.1	70-130	30.3		

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit
DL	Method Detection Limit
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
J	Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated concentration (CLP J-Flag).
L-01	Laboratory fortified blank /laboratory control sample recovery outside of control limits. Data validation is not affected since all results are "not detected" for all samples in this batch for this compound and bias is on the high side.
S-07	One associated surrogate standard recovery is outside of control limits but the other(s) is/are within limits. All recoveries are > 10%.
V-04	Initial calibration did not meet method specifications. Compound was calibrated using a response factor where %RSD is outside of method specified criteria.
V-05	Continuing calibration did not meet method specifications and was biased on the low side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the low side.
V-06	Continuing calibration did not meet method specifications and was biased on the high side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the high side.
V-19	Initial calibration did not meet method specifications. Compound was calibrated using linear regression with correlation coefficient <0.99. Reduced precision and accuracy may be associated with reported result.

CERTIFICATIONS
Certified Analyses included in this Report

Analyte	Certifications
<i>EPA 200.7 in Water</i>	
Iron	CT,MA,NH,NY,RI,NC,ME,VA
<i>EPA 200.8 in Water</i>	
Antimony	CT,MA,NH,NY,RI,NC,ME,VA
Arsenic	CT,MA,NH,NY,RI,NC,ME,VA
Cadmium	CT,MA,NH,NY,RI,NC,ME,VA
Chromium	CT,MA,NH,NY,RI,NC,ME,VA
Copper	CT,MA,NH,NY,RI,NC,ME,VA
Lead	CT,MA,NH,NY,RI,NC,ME,VA
Nickel	CT,MA,NH,NY,RI,NC,ME,VA
Selenium	CT,MA,NH,NY,RI,NC,ME,VA
Silver	CT,MA,NH,NY,RI,NC,ME,VA
Zinc	CT,MA,NH,NY,RI,NC,ME,VA
<i>EPA 245.1 in Water</i>	
Mercury	CT,MA,NH,RI,NY,NC,ME,VA
<i>EPA 300.0 in Water</i>	
Chloride	NC,NY,MA,VA,ME,NH,CT,RI
<i>EPA 608 in Water</i>	
Aroclor-1016	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1016 [2C]	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1221	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1221 [2C]	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1232	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1232 [2C]	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1242	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1242 [2C]	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1248	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1248 [2C]	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1254	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1254 [2C]	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1260	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1260 [2C]	CT,MA,NH,NY,RI,NC,ME,VA
<i>EPA 624 in Water</i>	
Acetone	NH,NY
Benzene	CT,MA,NH,NY,RI,NC,ME,VA
Carbon Tetrachloride	CT,MA,NH,NY,RI,NC,ME,VA
1,2-Dichlorobenzene	CT,MA,NH,NY,RI,NC,ME,VA
1,3-Dichlorobenzene	CT,MA,NH,NY,RI,NC,ME,VA
1,4-Dichlorobenzene	CT,MA,NH,NY,RI,NC,ME,VA
1,2-Dichloroethane	CT,MA,NH,NY,RI,NC,ME,VA
1,1-Dichloroethane	CT,MA,NH,NY,RI,NC,ME,VA
1,1-Dichloroethylene	CT,MA,NH,NY,RI,NC,ME,VA
Ethylbenzene	CT,MA,NH,NY,RI,NC,ME,VA
Methyl tert-Butyl Ether (MTBE)	NH,NY,NC
Methylene Chloride	CT,MA,NH,NY,RI,NC,ME,VA
Naphthalene	NC

CERTIFICATIONS
Certified Analyses included in this Report

Analyte	Certifications
<i>EPA 624 in Water</i>	
Tetrachloroethylene	CT,MA,NH,NY,RI,NC,ME,VA
Toluene	CT,MA,NH,NY,RI,NC,ME,VA
1,2,4-Trichlorobenzene	NC
1,1,1-Trichloroethane	CT,MA,NH,NY,RI,NC,ME,VA
1,1,2-Trichloroethane	CT,MA,NH,NY,RI,NC,ME,VA
Trichloroethylene	CT,MA,NH,NY,RI,NC,ME,VA
Vinyl Chloride	CT,MA,NH,NY,RI,NC,ME,VA
m+p Xylene	CT,MA,NH,NY,RI,NC,VA
o-Xylene	CT,MA,NH,NY,RI,NC,VA
<i>EPA 625 in Water</i>	
Acenaphthene	CT,MA,NH,NY,NC,RI,ME,VA
Acenaphthylene	CT,MA,NH,NY,NC,RI,ME,VA
Anthracene	CT,MA,NH,NY,NC,RI,ME,VA
Benzidine	CT,MA,NH,NY,NC,RI,ME,VA
Benzo(a)anthracene	CT,MA,NH,NY,NC,RI,ME,VA
Benzo(a)pyrene	CT,MA,NH,NY,NC,RI,ME,VA
Benzo(b)fluoranthene	CT,MA,NH,NY,NC,RI,ME,VA
Benzo(g,h,i)perylene	CT,MA,NH,NY,NC,RI,ME,VA
Benzo(k)fluoranthene	CT,MA,NH,NY,NC,RI,ME,VA
4-Bromophenylphenylether	CT,MA,NH,NY,NC,RI,ME,VA
Butylbenzylphthalate	CT,MA,NH,NY,NC,RI,ME,VA
4-Chloro-3-methylphenol	CT,MA,NH,NY,NC,RI,VA
Bis(2-chloroethyl)ether	CT,MA,NH,NY,NC,RI,ME,VA
Bis(2-chloroisopropyl)ether	CT,MA,NH,NY,NC,RI,ME,VA
2-Chloronaphthalene	CT,MA,NH,NY,NC,RI,ME,VA
2-Chlorophenol	CT,MA,NH,NY,NC,RI,ME,VA
4-Chlorophenylphenylether	CT,MA,NH,NY,NC,RI,ME,VA
Chrysene	CT,MA,NH,NY,NC,RI,ME,VA
Dibenz(a,h)anthracene	CT,MA,NH,NY,NC,RI,ME,VA
Di-n-butylphthalate	CT,MA,NH,NY,NC,RI,ME,VA
1,3-Dichlorobenzene	MA,NC
1,4-Dichlorobenzene	MA,NC
1,2-Dichlorobenzene	MA,NC
3,3-Dichlorobenzidine	CT,MA,NH,NY,NC,RI,ME,VA
2,4-Dichlorophenol	CT,MA,NH,NY,NC,RI,ME,VA
Diethylphthalate	CT,MA,NH,NY,NC,RI,ME,VA
2,4-Dimethylphenol	CT,MA,NH,NY,NC,RI,ME,VA
Dimethylphthalate	CT,MA,NH,NY,NC,RI,ME,VA
4,6-Dinitro-2-methylphenol	CT,MA,NH,NY,NC,RI,ME,VA
2,4-Dinitrophenol	CT,MA,NH,NY,NC,RI,ME,VA
2,4-Dinitrotoluene	CT,MA,NH,NY,NC,RI,ME,VA
2,6-Dinitrotoluene	CT,MA,NH,NY,NC,RI,ME,VA
Di-n-octylphthalate	CT,MA,NH,NY,NC,RI,ME,VA
1,2-Diphenylhydrazine (as Azobenzene)	NC
Bis(2-Ethylhexyl)phthalate	CT,MA,NH,NY,NC,RI,ME,VA
Fluoranthene	CT,MA,NH,NY,NC,RI,ME,VA

CERTIFICATIONS
Certified Analyses included in this Report

Analyte	Certifications
<i>EPA 625 in Water</i>	
Fluorene	CT,MA,NH,NY,NC,RI,ME,VA
Hexachlorobenzene	CT,MA,NH,NY,NC,RI,ME,VA
Hexachlorobutadiene	CT,MA,NH,NY,NC,RI,ME,VA
Hexachlorocyclopentadiene	CT,MA,NH,NY,NC,RI,ME,VA
Hexachloroethane	CT,MA,NH,NY,NC,RI,ME,VA
Indeno(1,2,3-cd)pyrene	CT,MA,NH,NY,NC,RI,ME,VA
Isophorone	CT,MA,NH,NY,NC,RI,ME,VA
Naphthalene	CT,MA,NH,NY,NC,RI,ME,VA
Nitrobenzene	CT,MA,NH,NY,NC,RI,ME,VA
2-Nitrophenol	CT,MA,NH,NY,NC,RI,ME,VA
4-Nitrophenol	CT,MA,NH,NY,NC,RI,ME,VA
N-Nitrosodimethylamine	CT,MA,NH,NY,NC,RI,ME,VA
N-Nitrosodiphenylamine	CT,MA,NH,NY,NC,RI,ME,VA
N-Nitrosodi-n-propylamine	CT,MA,NH,NY,NC,RI,ME,VA
Pentachlorophenol	CT,MA,NH,NY,NC,RI,ME,VA
2-Methylnaphthalene	NC
Phenanthrene	CT,MA,NH,NY,NC,RI,ME,VA
2-Methylphenol	NY,NC
Phenol	CT,MA,NH,NY,NC,RI,ME,VA
3/4-Methylphenol	NY,NC
Pyrene	CT,MA,NH,NY,NC,RI,ME,VA
1,2,4-Trichlorobenzene	CT,MA,NH,NY,NC,RI,ME,VA
2,4,6-Trichlorophenol	CT,MA,NH,NY,NC,RI,ME,VA
2-Fluorophenol	NC
<i>SM19-22 4500 NH3 C in Water</i>	
Ammonia as N	NY,MA,CT,RI,VA,NC,ME
<i>SM21-22 2540D in Water</i>	
Total Suspended Solids	CT,MA,NH,NY,RI,NC,ME,VA
<i>SM21-22 3500 Cr B in Water</i>	
Hexavalent Chromium	NY,CT,NH,RI,ME,VA,NC
<i>SM21-22 4500 CL G in Water</i>	
Chlorine, Residual	CT,MA,RI,ME
<i>SM21-22 4500 CN E in Water</i>	
Cyanide	CT,MA,NH,NY,RI,NC,ME,VA
<i>SW-846 8015C in Water</i>	
Ethanol	NY
<i>SW-846 8270D in Water</i>	
Acenaphthene	CT,NY,NC,ME,NH,VA,NJ
Acenaphthylene	CT,NY,NC,ME,NH,VA,NJ
Anthracene	CT,NY,NC,ME,NH,VA,NJ
Benzidine	CT,NY,NC,ME,NH,VA,NJ
Benzo(a)anthracene	CT,NY,NC,ME,NH,VA,NJ
Benzo(a)pyrene	CT,NY,NC,ME,NH,VA,NJ
Benzo(b)fluoranthene	CT,NY,NC,ME,NH,VA,NJ

CERTIFICATIONS
Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8270D in Water</i>	
Benzo(g,h,i)perylene	CT,NY,NC,ME,NH,VA,NJ
Benzo(k)fluoranthene	CT,NY,NC,ME,NH,VA,NJ
Bis(2-chloroethyl)ether	CT,NY,NC,ME,NH,VA,NJ
Bis(2-chloroisopropyl)ether	CT,NY,NC,ME,NH,VA,NJ
Bis(2-Ethylhexyl)phthalate	CT,NY,NC,ME,NH,VA,NJ
4-Bromophenylphenylether	CT,NY,NC,ME,NH,VA,NJ
Butylbenzylphthalate	CT,NY,NC,ME,NH,VA,NJ
4-Chloro-3-methylphenol	CT,NY,NC,ME,NH,VA,NJ
2-Chloronaphthalene	CT,NY,NC,ME,NH,VA,NJ
2-Chlorophenol	CT,NY,NC,ME,NH,VA,NJ
4-Chlorophenylphenylether	CT,NY,NC,ME,NH,VA,NJ
Chrysene	CT,NY,NC,ME,NH,VA,NJ
Dibenz(a,h)anthracene	CT,NY,NC,ME,NH,VA,NJ
Di-n-butylphthalate	CT,NY,NC,ME,NH,VA,NJ
1,2-Dichlorobenzene	CT,NY,NC,ME,NH,VA,NJ
1,3-Dichlorobenzene	CT,NY,NC,ME,NH,VA,NJ
1,4-Dichlorobenzene	CT,NY,NC,ME,NH,VA,NJ
3,3-Dichlorobenzidine	CT,NY,NC,ME,NH,VA,NJ
2,4-Dichlorophenol	CT,NY,NC,ME,NH,VA,NJ
Diethylphthalate	CT,NY,NC,ME,NH,VA,NJ
2,4-Dimethylphenol	CT,NY,NC,ME,NH,VA,NJ
Dimethylphthalate	CT,NY,NC,ME,NH,VA,NJ
4,6-Dinitro-2-methylphenol	CT,NY,NC,ME,NH,VA,NJ
2,4-Dinitrophenol	CT,NY,NC,ME,NH,VA,NJ
2,4-Dinitrotoluene	CT,NY,NC,ME,NH,VA,NJ
2,6-Dinitrotoluene	CT,NY,NC,ME,NH,VA,NJ
Di-n-octylphthalate	CT,NY,NC,ME,NH,VA,NJ
1,2-Diphenylhydrazine (as Azobenzene)	NY,NC,ME
Fluoranthene	CT,NY,NC,ME,NH,VA,NJ
Fluorene	NY,NC,ME,NH,VA,NJ
Hexachlorobenzene	CT,NY,NC,ME,NH,VA,NJ
Hexachlorobutadiene	CT,NY,NC,ME,NH,VA,NJ
Hexachlorocyclopentadiene	CT,NY,NC,ME,NH,VA,NJ
Hexachloroethane	CT,NY,NC,ME,NH,VA,NJ
Indeno(1,2,3-cd)pyrene	CT,NY,NC,ME,NH,VA,NJ
Isophorone	CT,NY,NC,ME,NH,VA,NJ
2-Methylnaphthalene	CT,NY,NC,ME,NH,VA,NJ
2-Methylphenol	CT,NY,NC,NH,VA,NJ
3/4-Methylphenol	CT,NY,NC,NH,VA,NJ
Naphthalene	CT,NY,NC,ME,NH,VA,NJ
Nitrobenzene	CT,NY,NC,ME,NH,VA,NJ
2-Nitrophenol	CT,NY,NC,ME,NH,VA,NJ
4-Nitrophenol	CT,NY,NC,ME,NH,VA,NJ
N-Nitrosodimethylamine	CT,NY,NC,ME,NH,VA,NJ
N-Nitrosodiphenylamine	CT,NY,NC,ME,NH,VA,NJ
N-Nitrosodi-n-propylamine	CT,NY,NC,ME,NH,VA,NJ
Pentachlorophenol	CT,NY,NC,ME,NH,VA,NJ

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8270D in Water</i>	
Phenanthrene	CT,NY,NC,ME,NH,VA,NJ
Phenol	CT,NY,NC,ME,NH,VA,NJ
Pyrene	CT,NY,NC,ME,NH,VA,NJ
1,2,4-Trichlorobenzene	CT,NY,NC,ME,NH,VA,NJ
2,4,6-Trichlorophenol	CT,NY,NC,ME,NH,VA,NJ
2-Fluorophenol	NC,VA
Phenol-d6	VA
Nitrobenzene-d5	VA

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2005	100033	02/1/2018
MA	Massachusetts DEP	M-MA100	06/30/2018
CT	Connecticut Department of Public Health	PH-0567	09/30/2019
NY	New York State Department of Health	10899 NELAP	04/1/2018
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2018
RI	Rhode Island Department of Health	LAO00112	12/30/2017
NC	North Carolina Div. of Water Quality	652	12/31/2017
NJ	New Jersey DEP	MA007 NELAP	06/30/2018
FL	Florida Department of Health	E871027 NELAP	06/30/2018
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2018
ME	State of Maine	2011028	06/9/2019
VA	Commonwealth of Virginia	460217	12/14/2017
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2018
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2018
NC-DW	North Carolina Department of Health	25703	07/31/2018

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ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

Login Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False

Statement will be brought to the attention of the Client - State True or False

Client Lightship Eng.

Received By jm Date 11/21/17 Time 1900

How were the samples received? In Cooler T No Cooler On Ice T No Ice
Direct from Sampling Ambient Melted Ice

Were samples within Temperature? 2-6°C T By Gun # 1 Actual Temp - 2.7
By Blank # Actual Temp -

Was Custody Seal Intact? N/A Were Samples Tampered with? N/A
Was COC Relinquished? T Does Chain Agree With Samples? T

Are there broken/leaking/loose caps on any samples? F

Is COC in ink/ Legible? T Were samples received within holding time? T
Did COC include all pertinent Information? Client T Analysis F Sampler Name T
Project F ID's T Collection Dates/Times T

Are Sample labels filled out and legible? T

Are there Lab to Filters? N/A Who was notified?
Are there Rushes? T Who was notified? Ray
Are there Short Holds? N/A Who was notified?

Is there enough Volume? T

Is there Headspace where applicable? T MS/MSD? N/A
Proper Media/Containers Used? T Is splitting samples required? N/A
Were trip blanks received? T On COC? F

Do all samples have the proper pH? N/A Acid Base

Vials	#	Containers:	#		#		#
Unp-		1 Liter Amb.	<u>8</u>	1 Liter Plastic		16 oz Amb.	
HCL-	<u>8</u>	500 mL Amb.		500 mL Plastic		8oz Amb/Clear	
Meoh-		250 mL Amb.		250 mL Plastic		4oz Amb/Clear	
Bisulfate-		Col./Bacteria		Flashpoint		2oz Amb/Clear	
DI-		Other Plastic		Other Glass		Encore	
Thiosulfate-	<u>3</u>	SOC Kit		Plastic Bag		Frozen:	
Sulfuric-		Perchlorate		Ziplock			

Unused Media

Vials	#	Containers:	#		#		#
Unp-		1 Liter Amb.		1 Liter Plastic		16 oz Amb.	
HCL-		500 mL Amb.		500 mL Plastic		8oz Amb/Clear	
Meoh-		250 mL Amb.		250 mL Plastic		4oz Amb/Clear	
Bisulfate-		Col./Bacteria		Flashpoint		2oz Amb/Clear	
DI-		Other Plastic		Other Glass		Encore	
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:	
Sulfuric-		Perchlorate		Ziplock			

Comments:

★ Received TB not on chain.

Phone: 413-525-2332

Fax: 413-525-6405

Email: info@contestlabs.com

39 Spruce Street
East Longmeadow, MA 01028

CHAIN OF CUSTODY RECORD

Page 1 of 1



Company Name: **Lightship Engineering**
 Address: **30 Industrial Park Rd, Plymouth**
 Phone: **(508) 830-5344**
 Project Name: **500.98.12**
 Project Location: **South Boston**
 Project Number: **500.98.12**
 Project Manager: **Kevin P. V. A. R.**
 Con-Test Quote Name/Number: **EVERSOURCE AT Matt Waldrip**
 Invoice Recipient: **Jessica Savage**
 Sampled By: **Jessica Savage**

Fax To #:

CLP Like Data Pkg Required: ☐Email To: **K. Waldrip**Format: PDF ☒ EXCEL ☐Data Delivery: ☐Rush-Approval Required: ☐1-Day ☐ 3-Day ☐ 4-Day ☐2-Day ☒Requested Turnaround Time: ☐ 7-Day ☐ 10-Day ☐

Due Date:

ANALYSIS REQUESTED

Dissolved Metals Samples

Field Filtered ☐Lab to Filter ☐

Orthophosphate Samples

Field Filtered ☐Lab to Filter ☐

Matrix Codes:

GW = Ground Water

WW = Waste Water

DW = Drinking Water

A = Air

S = Soil

SL = Sludge

SOL = Solid

O = Other (please define)

Preservation Codes:

I = Iced

H = HCL

M = Methanol

N = Nitric Acid

S = Sulfuric Acid

B = Sodium Bisulfate

X = Sodium Hydroxide

T = Sodium Thiosulfate

O = Other (please define)

Container Codes:

A = Amber Glass

G = Glass

P = Plastic

ST = Sterile

V = Vial

S = Summa Canister

T = Tedlar Bag

O = Other (please define)

PCB ONLY

Soxhlet ☐Non Soxhlet ☐

Comments:

Bill to EverSource
ATT: Matt Waldrip

Trip blank will not be analyzed per the request
 of the client - EES 11/22/17

Detection Limit Requirements		Special Requirements	
MA	MA MCP Required	☒	MA MCP Required
CT	MCP Certification Form Required	☐	CT RCP Required
Other	RCP Certification Form Required	☐	MA State DW Required
Project Entity		PWSD #	
Government	Municipality	MWRA	Other
Federal	21 J	School	Chromatogram
City	Brownfield	MBTA	AHA-LAP, LLC



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Login Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False

Statement will be brought to the attention of the Client - State True or False

Client Lightship Eng.

Received By jm Date 11/21/17 Time 1900

How were the samples received? In Cooler T No Cooler On Ice T No Ice
Direct from Sampling Ambient Melted Ice

Were samples within Temperature? 2-6°C T By Gun # 1 Actual Temp - 2.7
By Blank # Actual Temp -

Was Custody Seal Intact? n/a Were Samples Tampered with? n/a
Was COC Relinquished? T Does Chain Agree With Samples? T

Are there broken/leaking/loose caps on any samples? F

Is COC in ink/ Legible? T Were samples received within holding time? T
Did COC include all pertinent Information? Client T Analysis F Sampler Name T
Project F ID's F Collection Dates/Times T

Are Sample labels filled out and legible? T

Are there Lab to Filters? n/a Who was notified?

Are there Rushes? T Who was notified? Ray

Are there Short Holds? n/a Who was notified?

Is there enough Volume? T

Is there Headspace where applicable? T MS/MSD? n/a

Proper Media/Containers Used? T Is splitting samples required? n/a

Were trip blanks received? T On COC? F

Do all samples have the proper pH? n/a Acid Base

Vials	#	Containers:	#		#		#
Unp-		1 Liter Amb.	<u>8</u>	1 Liter Plastic		16 oz Amb.	
HCL-	<u>8</u>	500 mL Amb.		500 mL Plastic		8oz Amb/Clear	
Meoh-		250 mL Amb.		250 mL Plastic		4oz Amb/Clear	
Bisulfate-		Col./Bacteria		Flashpoint		2oz Amb/Clear	
DI-		Other Plastic		Other Glass		Encore	
Thiosulfate-	<u>3</u>	SOC Kit		Plastic Bag		Frozen:	
Sulfuric-		Perchlorate		Ziplock			

Unused Media

Vials	#	Containers:	#		#		#
Unp-		1 Liter Amb.		1 Liter Plastic		16 oz Amb.	
HCL-		500 mL Amb.		500 mL Plastic		8oz Amb/Clear	
Meoh-		250 mL Amb.		250 mL Plastic		4oz Amb/Clear	
Bisulfate-		Col./Bacteria		Flashpoint		2oz Amb/Clear	
DI-		Other Plastic		Other Glass		Encore	
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:	
Sulfuric-		Perchlorate		Ziplock			

Comments:

★ Received TB not on chain.

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Login Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False Statement will be brought to the attention of the Client - State True or False

Client Lightship Engineering
Received By JM Date 11/20/17 Time 1555

How were the samples received? In Cooler T No Cooler On Ice T No Ice
Direct from Sampling Ambient Melted Ice

Were samples within Temperature? 2-6°C T By Gun # 1 Actual Temp - 2.8
By Blank # Actual Temp -

Was Custody Seal Intact? N/A Were Samples Tampled with? N/A
Was COC Relinquished? T Does Chain Agree With Samples? T

Are there broken/leaking/loose caps on any samples? F

Is COC in ink/ Legible? T Were samples received within holding time? T
Did COC include all Client T Analysis F Sampler Name T
pertinent Information? Project T ID's T Collection Dates/Times T

Are Sample labels filled out and legible? T

Are there Lab to Filters? N/A Who was notified?
Are there Rushes? T Who was notified? Luke
Are there Short Holds? T Who was notified? Luke

Is there enough Volume? T

Is there Headspace where applicable? N/A MS/MSD? N/A
Proper Media/Containers Used? T Is splitting samples required? N/A
Were trip blanks received? N/A On COC? N/A

Do all samples have the proper pH? Acid T Base T

Vials	#	Containers:	#	#	#	#
Unp-		1 Liter Amb.		1 Liter Plastic	1	16 oz Amb.
HCL-		500 mL Amb.		500 mL Plastic	2	8oz Amb/Clear
Meoh-		250 mL Amb.		250 mL Plastic	2	4oz Amb/Clear
Bisulfate-		Col./Bacteria		Flashpoint		2oz Amb/Clear
DI-		Other Plastic		Other Glass		Encore
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:
Sulfuric-		Perchlorate		Ziplock		

Unused Media

Vials	#	Containers:	#	#	#	#
Unp-		1 Liter Amb.		1 Liter Plastic		16 oz Amb.
HCL-		500 mL Amb.		500 mL Plastic		8oz Amb/Clear
Meoh-		250 mL Amb.		250 mL Plastic		4oz Amb/Clear
Bisulfate-		Col./Bacteria		Flashpoint		2oz Amb/Clear
DI-		Other Plastic		Other Glass		Encore
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:
Sulfuric-		Perchlorate		Ziplock		

Comments:

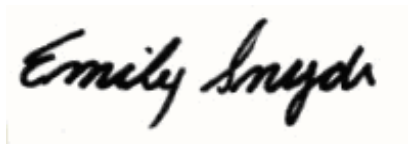
February 19, 2018

Kevin Paradise
Lightship Engineering, LLC
39 Industrial Park Road
Plymouth, MA 02360

Project Location: South Boston, MA
Client Job Number:
Project Number: 500.98.12
Laboratory Work Order Number: 18B0416

Enclosed are results of analyses for samples received by the laboratory on February 12, 2018. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Emily Snyder". The signature is written in a cursive, flowing style.

Emily E. Snyder
Project Manager

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REPORT DATE: 2/19/2018

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 500.98.12

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 18B0416

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: South Boston, MA

Page 4 of 75

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

For method 6010, only RCRA 8 metals were requested and reported.

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

EPA 200.8**Qualifications:****DL-15**

Sample required a dilution due to low internal standard recovery of the lesser diluted digestion, reporting limit is elevated.

Analyte & Samples(s) Qualified:**Lead**

18B0416-02[LE-TMW2]

EPA 625**Qualifications:****L-07**

Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.

Analyte & Samples(s) Qualified:**N-Nitrosodimethylamine**

B196705-BSD1

V-04

Initial calibration did not meet method specifications. Compound was calibrated using a response factor where %RSD is outside of method specified criteria. Reported result is estimated.

Analyte & Samples(s) Qualified:**2,4-Dinitrophenol**

18B0416-02[LE-TMW2], B196705-BLK1, B196705-BS1, B196705-BSD1

V-05

Continuing calibration did not meet method specifications and was biased on the low side for this compound. Reported result is estimated.

Analyte & Samples(s) Qualified:**Benzidine**

18B0416-02[LE-TMW2], B196705-BLK1, B196705-BS1, B196705-BSD1

V-19

Initial calibration did not meet method specifications. Compound was calibrated using linear regression with correlation coefficient <0.99. Reported result is estimated.

Analyte & Samples(s) Qualified:**Hexachlorocyclopentadiene**

18B0416-02[LE-TMW2], B196705-BLK1, B196705-BS1, B196705-BSD1

V-20

Continuing calibration did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

Analyte & Samples(s) Qualified:**Benzo(g,h,i)perylene**

18B0416-02[LE-TMW2], B196705-BLK1, B196705-BS1, B196705-BSD1

Bis(2-Ethylhexyl)phthalate

18B0416-02[LE-TMW2], B196705-BLK1, B196705-BS1, B196705-BSD1

Dimethylphthalate

18B0416-02[LE-TMW2], B196705-BLK1, B196705-BS1, B196705-BSD1

Di-n-butylphthalate

18B0416-02[LE-TMW2], B196705-BLK1, B196705-BS1, B196705-BSD1

Di-n-octylphthalate

18B0416-02[LE-TMW2], B196705-BLK1, B196705-BS1, B196705-BSD1

V-34

Initial calibration verification (ICV) did not meet method specifications and was biased on the low side for this compound. Reported result is estimated.

Analyte & Samples(s) Qualified:**3,3-Dichlorobenzidine**

18B0416-02[LE-TMW2], B196705-BLK1, B196705-BS1, B196705-BSD1

SM21-22 3500 Cr B**Qualifications:**

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

R-01

Duplicate RPD is outside of control limits. Reduced precision is anticipated for reported result.

Analyte & Samples(s) Qualified:**Hexavalent Chromium**

B196732-DUP1

SM21-22 4500 CL G

Qualifications:

Z-01

SM4500 test had a calibration point outside acceptable back calculated recovery. Reanalysis yielded similar non-conformance.

Analyte & Samples(s) Qualified:**Chlorine, Residual**

18B0416-02[LE-TMW2]

SW-846 6010C-D

Qualifications:

M-10

The reporting limit verification for the AIHA lead program is outside of control limits for this element. Any reported result at or near the detection limit may be biased on the high side.

Analyte & Samples(s) Qualified:**Lead**

B196818-MRL1

MS-11

Matrix spike recovery outside of control limits. Possibility of sample matrix effects that lead to a high bias for reported result or non-homogeneous sample aliquots cannot be eliminated.

Analyte & Samples(s) Qualified:**Lead**

18B0416-01[LE-WC29], B196711-MS1

R-02

Duplicate RPD is outside of control limits. Outlier can be attributed to sample non-homogeneity encountered during sample prep.

Analyte & Samples(s) Qualified:**Lead**

18B0416-01[LE-WC29], B196711-DUP1

SW-846 8082A

Qualifications:

O-32

A dilution was performed as part of the standard analytical procedure.

Analyte & Samples(s) Qualified:

18B0416-01[LE-WC29]

SW-846 8260C

Qualifications:

L-04

Laboratory fortified blank/laboratory control sample recovery and duplicate recovery are outside of control limits. Reported value for this compound is likely to be biased on the low side.

Analyte & Samples(s) Qualified:**2,2-Dichloropropane**

18B0416-01[LE-WC29], B196724-BLK1, B196724-BS1, B196724-BSD1

V-05

Continuing calibration did not meet method specifications and was biased on the low side for this compound. Reported result is estimated.

Analyte & Samples(s) Qualified:**2,2-Dichloropropane**

18B0416-01[LE-WC29], B196724-BLK1, B196724-BS1, B196724-BSD1

Carbon Tetrachloride

18B0416-01[LE-WC29], B196724-BLK1, B196724-BS1, B196724-BSD1

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V-16

Response factor is less than method specified minimum acceptable value. Reduced precision and accuracy may be associated with reported result.

Analyte & Samples(s) Qualified:**1,4-Dioxane**

18B0416-01[LE-WC29], B196724-BLK1, B196724-BS1, B196724-BSD1

V-34

Initial calibration verification (ICV) did not meet method specifications and was biased on the low side for this compound. Reported result is estimated.

Analyte & Samples(s) Qualified:**Bromomethane**

18B0416-01[LE-WC29], B196724-BLK1, B196724-BS1, B196724-BSD1

SW-846 8270D**Qualifications:****B**

Analyte is found in the associated blank as well as in the sample.

Analyte & Samples(s) Qualified:**Bis(2-Ethylhexyl)phthalate**

18B0416-02[LE-TMW2]

Ja

Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated concentration (CLP J-Flag).

Analyte & Samples(s) Qualified:**Bis(2-Ethylhexyl)phthalate**

18B0416-02[LE-TMW2], B196787-BLK1

L-04

Laboratory fortified blank/laboratory control sample recovery and duplicate recovery are outside of control limits. Reported value for this compound is likely to be biased on the low side.

Analyte & Samples(s) Qualified:**Aniline**

18B0416-01[LE-WC29], B196704-BLK1, B196704-BS1, B196704-BSD1

L-07

Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.

Analyte & Samples(s) Qualified:**2,4-Dinitrophenol**

B196704-BSD1

R-05

Laboratory fortified blank duplicate RPD is outside of control limits. Reduced precision is anticipated for any reported value for this compound.

Analyte & Samples(s) Qualified:**Benzo(g,h,i)perylene**

18B0416-01[LE-WC29], B196704-BLK1, B196704-BS1, B196704-BSD1

Butylbenzylphthalate

18B0416-01[LE-WC29], B196704-BLK1, B196704-BS1, B196704-BSD1

Pyrene

18B0416-01[LE-WC29], B196704-BLK1, B196704-BS1, B196704-BSD1

V-04

Initial calibration did not meet method specifications. Compound was calibrated using a response factor where %RSD is outside of method specified criteria. Reported result is estimated.

Analyte & Samples(s) Qualified:**2,4-Dinitrophenol**

18B0416-01[LE-WC29], B196704-BLK1, B196704-BS1, B196704-BSD1

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V-06

Continuing calibration did not meet method specifications and was biased on the high side for this compound. Reported result is estimated.

Analyte & Samples(s) Qualified:**Benzo(g,h,i)perylene**

B196704-BS1, B196704-BSD1

Dimethylphthalate

B196704-BS1, B196704-BSD1

Di-n-butylphthalate

B196704-BS1, B196704-BSD1

Di-n-octylphthalate

B196704-BS1, B196704-BSD1

V-20

Continuing calibration did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

Analyte & Samples(s) Qualified:**Benzo(g,h,i)perylene**

18B0416-01[LE-WC29], B196704-BLK1

Dimethylphthalate

18B0416-01[LE-WC29], B196704-BLK1

Di-n-butylphthalate

18B0416-01[LE-WC29], B196704-BLK1

Di-n-octylphthalate

18B0416-01[LE-WC29], B196704-BLK1

V-34

Initial calibration verification (ICV) did not meet method specifications and was biased on the low side for this compound. Reported result is estimated.

Analyte & Samples(s) Qualified:**3,3-Dichlorobenzidine**

18B0416-01[LE-WC29], B196704-BLK1, B196704-BS1, B196704-BSD1

4-Chloroaniline

18B0416-01[LE-WC29], B196704-BLK1, B196704-BS1, B196704-BSD1

Aniline

18B0416-01[LE-WC29], B196704-BLK1, B196704-BS1, B196704-BSD1

SW-846 9045C

Qualifications:

H-03

Sample received after recommended holding time was exceeded.

Analyte & Samples(s) Qualified:**pH**

18B0416-01[LE-WC29]

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MADEP-EPH-04-1.1

SPE cartridge contamination with non-petroleum compounds, if present, is verified by GC/MS in each method blank per extraction batch and excluded from C11-C22 aromatic range fraction in all samples in the batch. No significant modifications were made to the method.

SW-846 6010C/D SW-846 6020A/B

For NC, Metals methods SW-846 6010D and SW-846 6020B are followed, and for all other states methods SW-846 6010C and SW-846 6020A are followed.

SW-846 8100 Modified

TPH (C9-C36) is quantitated against a calibration made with a diesel standard.

SW-846 8260C

Laboratory control sample recoveries for required MCP Data Enhancement 8260 compounds were all within limits specified by the method except for "difficult analytes" where recovery control limits of 40-160% are used and/or unless otherwise listed in this narrative. Difficult analytes: MIBK, MEK, acetone, 1,4-dioxane, chloromethane, dichlorodifluoromethane, 2-hexanone, and bromomethane.

SW-846 8270D

Laboratory control sample recoveries for required MCP Data Enhancement 8270 compounds were all within control limits specified by the method, 40-140% for base/neutrals and 30-130% for acids except for "difficult analytes" listed below and/or otherwise listed in this narrative. Difficult analytes limits are 15 and 140%: 2,4-dinitrophenol, 4-chloroaniline, 4-nitrophenol, and phenol.

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

A handwritten signature in black ink, appearing to read "Lisa A. Worthington", is written over a light gray rectangular background.

Lisa A. Worthington
Project Manager

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: South Boston, MA

Sample Description:

Work Order: 18B0416

Date Received: 2/12/2018

Field Sample #: LE-TMW2

Sampled: 2/12/2018 14:45

Sample ID: 18B0416-02

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	50	9.7	µg/L	1		EPA 624	2/14/18	2/14/18 7:41	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.50	0.11	µg/L	1		EPA 624	2/14/18	2/14/18 7:41	MFF
Benzene	ND	1.0	0.12	µg/L	1		EPA 624	2/14/18	2/14/18 7:41	MFF
tert-Butyl Alcohol (TBA)	ND	20	2.2	µg/L	1		EPA 624	2/14/18	2/14/18 7:41	MFF
Carbon Tetrachloride	ND	2.0	0.25	µg/L	1		EPA 624	2/14/18	2/14/18 7:41	MFF
1,2-Dichlorobenzene	ND	2.0	0.17	µg/L	1		EPA 624	2/14/18	2/14/18 7:41	MFF
1,3-Dichlorobenzene	ND	2.0	0.17	µg/L	1		EPA 624	2/14/18	2/14/18 7:41	MFF
1,4-Dichlorobenzene	ND	2.0	0.15	µg/L	1		EPA 624	2/14/18	2/14/18 7:41	MFF
1,2-Dichloroethane	ND	2.0	0.19	µg/L	1		EPA 624	2/14/18	2/14/18 7:41	MFF
cis-1,2-Dichloroethylene	ND	1.0	0.15	µg/L	1		EPA 624	2/14/18	2/14/18 7:41	MFF
1,1-Dichloroethane	ND	2.0	0.16	µg/L	1		EPA 624	2/14/18	2/14/18 7:41	MFF
1,1-Dichloroethylene	ND	2.0	0.21	µg/L	1		EPA 624	2/14/18	2/14/18 7:41	MFF
1,4-Dioxane	ND	50	26	µg/L	1		EPA 624	2/14/18	2/14/18 7:41	MFF
Ethylbenzene	ND	2.0	0.13	µg/L	1		EPA 624	2/14/18	2/14/18 7:41	MFF
Methyl tert-Butyl Ether (MTBE)	ND	2.0	0.090	µg/L	1		EPA 624	2/14/18	2/14/18 7:41	MFF
Methylene Chloride	ND	5.0	3.2	µg/L	1		EPA 624	2/14/18	2/14/18 7:41	MFF
Tetrachloroethylene	ND	2.0	0.27	µg/L	1		EPA 624	2/14/18	2/14/18 7:41	MFF
Toluene	ND	1.0	0.17	µg/L	1		EPA 624	2/14/18	2/14/18 7:41	MFF
1,1,1-Trichloroethane	ND	2.0	0.13	µg/L	1		EPA 624	2/14/18	2/14/18 7:41	MFF
1,1,2-Trichloroethane	ND	2.0	0.24	µg/L	1		EPA 624	2/14/18	2/14/18 7:41	MFF
Trichloroethylene	ND	2.0	0.20	µg/L	1		EPA 624	2/14/18	2/14/18 7:41	MFF
Vinyl Chloride	ND	2.0	0.13	µg/L	1		EPA 624	2/14/18	2/14/18 7:41	MFF
m+p Xylene	ND	2.0	0.26	µg/L	1		EPA 624	2/14/18	2/14/18 7:41	MFF
o-Xylene	ND	2.0	0.13	µg/L	1		EPA 624	2/14/18	2/14/18 7:41	MFF
Surrogates	% Recovery	Recovery Limits		Flag/Qual						
1,2-Dichloroethane-d4	98.6	70-130								
Toluene-d8	99.9	70-130								
4-Bromofluorobenzene	95.3	70-130								

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Project Location: South Boston, MA

Sample Description:

Work Order: 18B0416

Date Received: 2/12/2018

Field Sample #: LE-TMW2

Sampled: 2/12/2018 14:45

Sample ID: 18B0416-02

Sample Matrix: Ground Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Benzo(a)anthracene	0.28	0.053	0.053	µg/L	1		SW-846 8270D	2/13/18	2/13/18 20:20	CJM
Benzo(a)pyrene	0.28	0.11	0.11	µg/L	1		SW-846 8270D	2/13/18	2/13/18 20:20	CJM
Benzo(b)fluoranthene	0.35	0.053	0.053	µg/L	1		SW-846 8270D	2/13/18	2/13/18 20:20	CJM
Benzo(k)fluoranthene	ND	0.21	0.21	µg/L	1		SW-846 8270D	2/13/18	2/13/18 20:20	CJM
Bis(2-Ethylhexyl)phthalate	0.35	1.1	0.11	µg/L	1	Ja, B	SW-846 8270D	2/13/18	2/13/18 20:20	CJM
Chrysene	0.24	0.21	0.21	µg/L	1		SW-846 8270D	2/13/18	2/13/18 20:20	CJM
Dibenz(a,h)anthracene	ND	0.21	0.21	µg/L	1		SW-846 8270D	2/13/18	2/13/18 20:20	CJM
Indeno(1,2,3-cd)pyrene	0.22	0.21	0.21	µg/L	1		SW-846 8270D	2/13/18	2/13/18 20:20	CJM
Pentachlorophenol	ND	1.1	0.36	µg/L	1		SW-846 8270D	2/13/18	2/13/18 20:20	CJM
Surrogates	% Recovery		Recovery Limits		Flag/Qual					
2-Fluorophenol	57.9		15-110				2/13/18 20:20			
Phenol-d6	35.8		15-110				2/13/18 20:20			
Nitrobenzene-d5	75.8		30-130				2/13/18 20:20			
2-Fluorobiphenyl	75.8		30-130				2/13/18 20:20			
2,4,6-Tribromophenol	95.3		15-110				2/13/18 20:20			
p-Terphenyl-d14	64.0		30-130				2/13/18 20:20			

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Project Location: South Boston, MA

Sample Description:

Work Order: 18B0416

Date Received: 2/12/2018

Field Sample #: LE-TMW2

Sampled: 2/12/2018 14:45

Sample ID: 18B0416-02

Sample Matrix: Ground Water

Semivolatile Organic Compounds by - GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	5.3	µg/L	1		EPA 625	2/13/18	2/13/18 12:53	BGL
Acenaphthylene	ND	5.3	µg/L	1		EPA 625	2/13/18	2/13/18 12:53	BGL
Anthracene	ND	5.3	µg/L	1		EPA 625	2/13/18	2/13/18 12:53	BGL
Benzidine	ND	21	µg/L	1	V-05	EPA 625	2/13/18	2/13/18 12:53	BGL
Benzo(a)anthracene	ND	5.3	µg/L	1		EPA 625	2/13/18	2/13/18 12:53	BGL
Benzo(a)pyrene	ND	5.3	µg/L	1		EPA 625	2/13/18	2/13/18 12:53	BGL
Benzo(b)fluoranthene	ND	5.3	µg/L	1		EPA 625	2/13/18	2/13/18 12:53	BGL
Benzo(g,h,i)perylene	ND	5.3	µg/L	1	V-20	EPA 625	2/13/18	2/13/18 12:53	BGL
Benzo(k)fluoranthene	ND	5.3	µg/L	1		EPA 625	2/13/18	2/13/18 12:53	BGL
4-Bromophenylphenylether	ND	11	µg/L	1		EPA 625	2/13/18	2/13/18 12:53	BGL
Butylbenzylphthalate	ND	11	µg/L	1		EPA 625	2/13/18	2/13/18 12:53	BGL
4-Chloro-3-methylphenol	ND	11	µg/L	1		EPA 625	2/13/18	2/13/18 12:53	BGL
Bis(2-chloroethoxy)methane	ND	11	µg/L	1		EPA 625	2/13/18	2/13/18 12:53	BGL
Bis(2-chloroethyl)ether	ND	11	µg/L	1		EPA 625	2/13/18	2/13/18 12:53	BGL
Bis(2-chloroisopropyl)ether	ND	11	µg/L	1		EPA 625	2/13/18	2/13/18 12:53	BGL
2-Chloronaphthalene	ND	11	µg/L	1		EPA 625	2/13/18	2/13/18 12:53	BGL
2-Chlorophenol	ND	11	µg/L	1		EPA 625	2/13/18	2/13/18 12:53	BGL
4-Chlorophenylphenylether	ND	11	µg/L	1		EPA 625	2/13/18	2/13/18 12:53	BGL
Chrysene	ND	5.3	µg/L	1		EPA 625	2/13/18	2/13/18 12:53	BGL
Dibenz(a,h)anthracene	ND	5.3	µg/L	1		EPA 625	2/13/18	2/13/18 12:53	BGL
Di-n-butylphthalate	ND	11	µg/L	1	V-20	EPA 625	2/13/18	2/13/18 12:53	BGL
1,3-Dichlorobenzene	ND	5.3	µg/L	1		EPA 625	2/13/18	2/13/18 12:53	BGL
1,4-Dichlorobenzene	ND	5.3	µg/L	1		EPA 625	2/13/18	2/13/18 12:53	BGL
1,2-Dichlorobenzene	ND	5.3	µg/L	1		EPA 625	2/13/18	2/13/18 12:53	BGL
3,3-Dichlorobenzidine	ND	11	µg/L	1	V-34	EPA 625	2/13/18	2/13/18 12:53	BGL
2,4-Dichlorophenol	ND	11	µg/L	1		EPA 625	2/13/18	2/13/18 12:53	BGL
Diethylphthalate	ND	11	µg/L	1		EPA 625	2/13/18	2/13/18 12:53	BGL
2,4-Dimethylphenol	ND	11	µg/L	1		EPA 625	2/13/18	2/13/18 12:53	BGL
Dimethylphthalate	ND	11	µg/L	1	V-20	EPA 625	2/13/18	2/13/18 12:53	BGL
4,6-Dinitro-2-methylphenol	ND	11	µg/L	1		EPA 625	2/13/18	2/13/18 12:53	BGL
2,4-Dinitrophenol	ND	11	µg/L	1	V-04	EPA 625	2/13/18	2/13/18 12:53	BGL
2,4-Dinitrotoluene	ND	11	µg/L	1		EPA 625	2/13/18	2/13/18 12:53	BGL
2,6-Dinitrotoluene	ND	11	µg/L	1		EPA 625	2/13/18	2/13/18 12:53	BGL
Di-n-octylphthalate	ND	11	µg/L	1	V-20	EPA 625	2/13/18	2/13/18 12:53	BGL
1,2-Diphenylhydrazine (as Azobenzene)	ND	11	µg/L	1		EPA 625	2/13/18	2/13/18 12:53	BGL
Bis(2-Ethylhexyl)phthalate	ND	11	µg/L	1	V-20	EPA 625	2/13/18	2/13/18 12:53	BGL
Fluoranthene	ND	5.3	µg/L	1		EPA 625	2/13/18	2/13/18 12:53	BGL
Fluorene	ND	5.3	µg/L	1		EPA 625	2/13/18	2/13/18 12:53	BGL
Hexachlorobenzene	ND	11	µg/L	1		EPA 625	2/13/18	2/13/18 12:53	BGL
Hexachlorobutadiene	ND	11	µg/L	1		EPA 625	2/13/18	2/13/18 12:53	BGL
Hexachlorocyclopentadiene	ND	11	µg/L	1	V-19	EPA 625	2/13/18	2/13/18 12:53	BGL
Hexachloroethane	ND	11	µg/L	1		EPA 625	2/13/18	2/13/18 12:53	BGL
Indeno(1,2,3-cd)pyrene	ND	5.3	µg/L	1		EPA 625	2/13/18	2/13/18 12:53	BGL
Isophorone	ND	11	µg/L	1		EPA 625	2/13/18	2/13/18 12:53	BGL

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Project Location: South Boston, MA

Sample Description:

Work Order: 18B0416

Date Received: 2/12/2018

Field Sample #: LE-TMW2

Sampled: 2/12/2018 14:45

Sample ID: 18B0416-02

Sample Matrix: Ground Water

Semivolatile Organic Compounds by - GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Naphthalene	ND	5.3	µg/L	1		EPA 625	2/13/18	2/13/18 12:53	BGL
Nitrobenzene	ND	11	µg/L	1		EPA 625	2/13/18	2/13/18 12:53	BGL
2-Nitrophenol	ND	11	µg/L	1		EPA 625	2/13/18	2/13/18 12:53	BGL
4-Nitrophenol	ND	11	µg/L	1		EPA 625	2/13/18	2/13/18 12:53	BGL
N-Nitrosodimethylamine	ND	11	µg/L	1		EPA 625	2/13/18	2/13/18 12:53	BGL
N-Nitrosodiphenylamine	ND	11	µg/L	1		EPA 625	2/13/18	2/13/18 12:53	BGL
N-Nitrosodi-n-propylamine	ND	11	µg/L	1		EPA 625	2/13/18	2/13/18 12:53	BGL
Pentachlorophenol	ND	11	µg/L	1		EPA 625	2/13/18	2/13/18 12:53	BGL
2-Methylnaphthalene	ND	5.3	µg/L	1		EPA 625	2/13/18	2/13/18 12:53	BGL
Phenanthrene	ND	5.3	µg/L	1		EPA 625	2/13/18	2/13/18 12:53	BGL
2-Methylphenol	ND	11	µg/L	1		EPA 625	2/13/18	2/13/18 12:53	BGL
Phenol	ND	11	µg/L	1		EPA 625	2/13/18	2/13/18 12:53	BGL
3/4-Methylphenol	ND	11	µg/L	1		EPA 625	2/13/18	2/13/18 12:53	BGL
Pyrene	ND	5.3	µg/L	1		EPA 625	2/13/18	2/13/18 12:53	BGL
1,2,4-Trichlorobenzene	ND	5.3	µg/L	1		EPA 625	2/13/18	2/13/18 12:53	BGL
2,4,6-Trichlorophenol	ND	11	µg/L	1		EPA 625	2/13/18	2/13/18 12:53	BGL
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
2-Fluorophenol	52.4	15-110						2/13/18 12:53	
Phenol-d6	36.1	15-110						2/13/18 12:53	
Nitrobenzene-d5	85.5	30-130						2/13/18 12:53	
2-Fluorobiphenyl	80.1	30-130						2/13/18 12:53	
2,4,6-Tribromophenol	81.1	15-110						2/13/18 12:53	
p-Terphenyl-d14	95.7	30-130						2/13/18 12:53	

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Project Location: South Boston, MA

Sample Description:

Work Order: 18B0416

Date Received: 2/12/2018

Field Sample #: LE-TMW2

Sampled: 2/12/2018 14:45

Sample ID: 18B0416-02

Sample Matrix: Ground Water

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.11	0.061	µg/L	1		EPA 608	2/12/18	2/14/18 9:19	KAL
Aroclor-1221 [1]	ND	0.11	0.065	µg/L	1		EPA 608	2/12/18	2/14/18 9:19	KAL
Aroclor-1232 [1]	ND	0.11	0.040	µg/L	1		EPA 608	2/12/18	2/14/18 9:19	KAL
Aroclor-1242 [1]	ND	0.11	0.057	µg/L	1		EPA 608	2/12/18	2/14/18 9:19	KAL
Aroclor-1248 [1]	ND	0.11	0.069	µg/L	1		EPA 608	2/12/18	2/14/18 9:19	KAL
Aroclor-1254 [1]	ND	0.11	0.076	µg/L	1		EPA 608	2/12/18	2/14/18 9:19	KAL
Aroclor-1260 [1]	ND	0.11	0.078	µg/L	1		EPA 608	2/12/18	2/14/18 9:19	KAL
Surrogates	% Recovery		Recovery Limits		Flag/Qual					
Decachlorobiphenyl [1]	75.9		30-150				2/14/18 9:19			
Decachlorobiphenyl [2]	95.8		30-150				2/14/18 9:19			
Tetrachloro-m-xylene [1]	84.2		30-150				2/14/18 9:19			
Tetrachloro-m-xylene [2]	92.0		30-150				2/14/18 9:19			

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Project Location: South Boston, MA

Sample Description:

Work Order: 18B0416

Date Received: 2/12/2018

Field Sample #: LE-TMW2

Sampled: 2/12/2018 14:45

Sample ID: 18B0416-02

Sample Matrix: Ground Water

Petrolium Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	2/13/18	2/13/18 16:51	RMW
C19-C36 Aliphatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	2/13/18	2/13/18 16:51	RMW
Unadjusted C11-C22 Aromatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	2/13/18	2/13/18 16:51	RMW
C11-C22 Aromatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	2/13/18	2/13/18 16:51	RMW
Acenaphthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	2/13/18	2/13/18 16:51	RMW
Acenaphthylene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	2/13/18	2/13/18 16:51	RMW
Anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	2/13/18	2/13/18 16:51	RMW
Benzo(a)anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	2/13/18	2/13/18 16:51	RMW
Benzo(a)pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	2/13/18	2/13/18 16:51	RMW
Benzo(b)fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	2/13/18	2/13/18 16:51	RMW
Benzo(g,h,i)perylene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	2/13/18	2/13/18 16:51	RMW
Benzo(k)fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	2/13/18	2/13/18 16:51	RMW
Chrysene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	2/13/18	2/13/18 16:51	RMW
Dibenz(a,h)anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	2/13/18	2/13/18 16:51	RMW
Fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	2/13/18	2/13/18 16:51	RMW
Fluorene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	2/13/18	2/13/18 16:51	RMW
Indeno(1,2,3-cd)pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	2/13/18	2/13/18 16:51	RMW
2-Methylnaphthalene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	2/13/18	2/13/18 16:51	RMW
Naphthalene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	2/13/18	2/13/18 16:51	RMW
Phenanthrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	2/13/18	2/13/18 16:51	RMW
Pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	2/13/18	2/13/18 16:51	RMW

Surrogates	% Recovery	Recovery Limits	Flag/Qual
Chlorooctadecane (COD)	84.0	40-140	
o-Terphenyl (OTP)	80.0	40-140	
2-Bromonaphthalene	94.6	40-140	
2-Fluorobiphenyl	85.7	40-140	

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Project Location: South Boston, MA

Sample Description:

Work Order: 18B0416

Date Received: 2/12/2018

Field Sample #: LE-TMW2

Sampled: 2/12/2018 14:45

Sample ID: 18B0416-02

Sample Matrix: Ground Water

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.0		µg/L	1		EPA 200.8	2/13/18	2/14/18 1:07	MJH
Arsenic	ND	1.0		µg/L	1		EPA 200.8	2/13/18	2/14/18 1:07	MJH
Cadmium	1.1	0.20		µg/L	1		EPA 200.8	2/13/18	2/14/18 1:07	MJH
Chromium	ND	10		µg/L	1		EPA 200.8	2/13/18	2/14/18 1:07	MJH
Chromium, Trivalent	0.0			mg/L	1		Tri Chrome Calc.	2/13/18	2/14/18 1:27	MJH
Copper	16	1.0		µg/L	1		EPA 200.8	2/13/18	2/14/18 1:07	MJH
Iron	0.20	0.050		mg/L	1		EPA 200.7	2/13/18	2/15/18 11:54	QNW
Lead	12	2.5		µg/L	5	DL-15	EPA 200.8	2/13/18	2/14/18 1:18	MJH
Mercury	ND	0.00010		mg/L	1		EPA 245.1	2/13/18	2/13/18 12:48	EJB
Nickel	15	5.0		µg/L	1		EPA 200.8	2/13/18	2/14/18 1:07	MJH
Selenium	ND	5.0	2.1	µg/L	1		EPA 200.8	2/13/18	2/14/18 1:07	MJH
Silver	ND	0.20		µg/L	1		EPA 200.8	2/13/18	2/14/18 1:07	MJH
Zinc	100	20		µg/L	1		EPA 200.8	2/13/18	2/14/18 1:07	MJH

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Project Location: South Boston, MA

Sample Description:

Work Order: 18B0416

Date Received: 2/12/2018

Field Sample #: LE-TMW2

Sampled: 2/12/2018 14:45

Sample ID: 18B0416-02

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Chlorine, Residual	ND	0.020		mg/L	1	Z-01	SM21-22 4500 CL G	2/12/18	2/12/18 22:09	LL
Hexavalent Chromium	ND	0.0040		mg/L	1		SM21-22 3500 Cr B	2/12/18	2/12/18 20:00	LL
Total Suspended Solids	7.0	5.0		mg/L	1		SM21-22 2540D	2/13/18	2/13/18 9:10	LL
Silica Gel Treated HEM (SGT-HEM)	ND	1.6		mg/L	1		EPA 1664B	2/13/18	2/13/18 10:30	LL

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Project Location: South Boston, MA

Sample Description:

Work Order: 18B0416

Date Received: 2/12/2018

Field Sample #: LE-TMW2

Sampled: 2/12/2018 14:45

Sample ID: 18B0416-02

Sample Matrix: Ground Water

Drinking Water Organics EPA 504.1

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
1,2-Dibromoethane (EDB) (1)	ND	0.020	µg/L	1		EPA 504.1	2/13/18	2/13/18 15:10	JMB
Surrogates	% Recovery	Recovery Limits			Flag/Qual				
1,3-Dibromopropane (1)	76.7	70-130						2/13/18 15:10	

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Project Location: South Boston, MA

Sample Description:

Work Order: 18B0416

Date Received: 2/12/2018

Field Sample #: LE-TMW2

Sampled: 2/12/2018 14:45

Sample ID: 18B0416-02

Sample Matrix: Ground Water

Semivolatile Organic Compounds by GC

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Ethanol	ND	2000	500	ug/L	1		SW-846 8015C		2/15/18 0:00	TA NA

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Project Location: South Boston, MA

Sample Description:

Work Order: 18B0416

Date Received: 2/12/2018

Field Sample #: LE-TMW2

Sampled: 2/12/2018 14:45

Sample ID: 18B0416-02

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Ammonia as N	0.266	0.075	0.024	mg/L	1		SM19-22 4500 NH3 C		2/13/18 0:00	ALPHA
Cyanide	0.004	0.005	0.001	mg/L	1	J	SM21-22 4500 CN E		2/14/18 0:00	ALPHA

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Project Location: South Boston, MA

Sample Description:

Work Order: 18B0416

Date Received: 2/12/2018

Field Sample #: LE-TMW2

Sampled: 2/12/2018 14:45

Sample ID: 18B0416-02

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Chloride	1210	49	4.87	mg/L	49		EPA 300.0		2/13/18 0:00	EUROF

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Sample Extraction Data**EPA 1664B**

Lab Number [Field ID]	Batch	Initial [mL]	Date	
18B0416-02 [LE-TMW2]	B196747	900	02/13/18	

Prep Method: EPA 200.7-EPA 200.7

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
18B0416-02 [LE-TMW2]	B196735	50.0	50.0	02/13/18

Prep Method: EPA 200.8-EPA 200.8

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
18B0416-02 [LE-TMW2]	B196737	50.0	50.0	02/13/18

Prep Method: EPA 245.1-EPA 245.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
18B0416-02 [LE-TMW2]	B196740	6.00	6.00	02/13/18

Prep Method: EPA 504 water-EPA 504.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
18B0416-02 [LE-TMW2]	B196751	35.3	35.0	02/13/18

Prep Method: SW-846 3510C-EPA 608

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
18B0416-02 [LE-TMW2]	B196690	940	5.00	02/12/18

Prep Method: SW-846 5030B-EPA 624

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
18B0416-02 [LE-TMW2]	B196770	5	5.00	02/14/18

Prep Method: SW-846 3510C-EPA 625

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
18B0416-02 [LE-TMW2]	B196705	940	1.00	02/13/18

Prep Method: SW-846 3510C-MADEP-EPH-04-1.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
18B0416-02 [LE-TMW2]	B196613	1000	2.00	02/13/18

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Sample Extraction Data**Prep Method: % Solids-SM 2540G**

Lab Number [Field ID]	Batch	Date
18B0416-01 [LE-WC29]	B196723	02/13/18

SM21-22 2510B Modified

Lab Number [Field ID]	Batch	Initial [g]	Date
18B0416-01 [LE-WC29]	B196743	1.00	02/13/18

SM21-22 2540D

Lab Number [Field ID]	Batch	Initial [mL]	Date
18B0416-02 [LE-TMW2]	B196719	100	02/13/18

SM21-22 3500 Cr B

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
18B0416-02 [LE-TMW2]	B196732	50.0	50.0	02/12/18

SM21-22 4500 CL G

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
18B0416-02 [LE-TMW2]	B196702	100	100	02/12/18

SW-846 1030

Lab Number [Field ID]	Batch	Initial [g]	Date
18B0416-01 [LE-WC29]	B196800	50.0	02/13/18

Prep Method: SW-846 3051-SW-846 6010C-D

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18B0416-01 [LE-WC29]	B196711	1.51	50.0	02/13/18

Prep Method: SW-846 7471-SW-846 7471B

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18B0416-01 [LE-WC29]	B196713	0.574	50.0	02/13/18

Prep Method: SW-846 3546-SW-846 8082A

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18B0416-01 [LE-WC29]	B196707	10.0	10.0	02/13/18

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Sample Extraction Data**Prep Method: SW-846 3546-SW-846 8100 Modified**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18B0416-01 [LE-WC29]	B196706	30.0	1.00	02/13/18

Prep Method: SW-846 5035-SW-846 8260C

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18B0416-01 [LE-WC29]	B196724	9.10	10.0	02/13/18

Prep Method: SW-846 3546-SW-846 8270D

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18B0416-01 [LE-WC29]	B196704	30.0	1.00	02/13/18

Prep Method: SW-846 3510C-SW-846 8270D

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
18B0416-02 [LE-TMW2]	B196787	940	1.00	02/13/18

SW-846 9014

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18B0416-01 [LE-WC29]	B196744	25.2	250	02/13/18

SW-846 9030A

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18B0416-01 [LE-WC29]	B196748	25.2	250	02/13/18

SW-846 9045C

Lab Number [Field ID]	Batch	Initial [g]	Date
18B0416-01 [LE-WC29]	B196802	20.0	02/13/18

Prep Method: SW-846 3005A-Tri Chrome Calc.

Lab Number [Field ID]	Batch	Initial [mL]	Date
18B0416-02 [LE-TMW2]	B196738	1.00	02/13/18

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B196724 - SW-846 5035										
Blank (B196724-BLK1)				Prepared & Analyzed: 02/13/18						
Acetone	ND	0.10	mg/Kg wet							
tert-Amyl Methyl Ether (TAME)	ND	0.0010	mg/Kg wet							
Benzene	ND	0.0020	mg/Kg wet							
Bromobenzene	ND	0.0020	mg/Kg wet							
Bromochloromethane	ND	0.0020	mg/Kg wet							
Bromodichloromethane	ND	0.0020	mg/Kg wet							
Bromoform	ND	0.0020	mg/Kg wet							
Bromomethane	ND	0.010	mg/Kg wet							V-34
2-Butanone (MEK)	ND	0.040	mg/Kg wet							
n-Butylbenzene	ND	0.0020	mg/Kg wet							
sec-Butylbenzene	ND	0.0020	mg/Kg wet							
tert-Butylbenzene	ND	0.0020	mg/Kg wet							
tert-Butyl Ethyl Ether (TBEE)	ND	0.0010	mg/Kg wet							
Carbon Disulfide	ND	0.0060	mg/Kg wet							
Carbon Tetrachloride	ND	0.0020	mg/Kg wet							V-05
Chlorobenzene	ND	0.0020	mg/Kg wet							
Chlorodibromomethane	ND	0.0010	mg/Kg wet							
Chloroethane	ND	0.010	mg/Kg wet							
Chloroform	ND	0.0040	mg/Kg wet							
Chloromethane	ND	0.010	mg/Kg wet							
2-Chlorotoluene	ND	0.0020	mg/Kg wet							
4-Chlorotoluene	ND	0.0020	mg/Kg wet							
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0020	mg/Kg wet							
1,2-Dibromoethane (EDB)	ND	0.0010	mg/Kg wet							
Dibromomethane	ND	0.0020	mg/Kg wet							
1,2-Dichlorobenzene	ND	0.0020	mg/Kg wet							
1,3-Dichlorobenzene	ND	0.0020	mg/Kg wet							
1,4-Dichlorobenzene	ND	0.0020	mg/Kg wet							
Dichlorodifluoromethane (Freon 12)	ND	0.010	mg/Kg wet							
1,1-Dichloroethane	ND	0.0020	mg/Kg wet							
1,2-Dichloroethane	ND	0.0020	mg/Kg wet							
1,1-Dichloroethylene	ND	0.0040	mg/Kg wet							
cis-1,2-Dichloroethylene	ND	0.0020	mg/Kg wet							
trans-1,2-Dichloroethylene	ND	0.0020	mg/Kg wet							
1,2-Dichloropropane	ND	0.0020	mg/Kg wet							
1,3-Dichloropropane	ND	0.0010	mg/Kg wet							
2,2-Dichloropropane	ND	0.0020	mg/Kg wet							L-04, V-05
1,1-Dichloropropene	ND	0.0020	mg/Kg wet							
cis-1,3-Dichloropropene	ND	0.0010	mg/Kg wet							
trans-1,3-Dichloropropene	ND	0.0010	mg/Kg wet							
Diethyl Ether	ND	0.010	mg/Kg wet							
Diisopropyl Ether (DIPE)	ND	0.0010	mg/Kg wet							
1,4-Dioxane	ND	0.10	mg/Kg wet							V-16
Ethylbenzene	ND	0.0020	mg/Kg wet							
Hexachlorobutadiene	ND	0.0020	mg/Kg wet							
2-Hexanone (MBK)	ND	0.020	mg/Kg wet							
Isopropylbenzene (Cumene)	ND	0.0020	mg/Kg wet							
p-Isopropyltoluene (p-Cymene)	ND	0.0020	mg/Kg wet							
Methyl tert-Butyl Ether (MTBE)	ND	0.0040	mg/Kg wet							
Methylene Chloride	ND	0.010	mg/Kg wet							
4-Methyl-2-pentanone (MIBK)	ND	0.020	mg/Kg wet							
Naphthalene	ND	0.0040	mg/Kg wet							

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QUALITY CONTROL
Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B196724 - SW-846 5035
Blank (B196724-BLK1)

Prepared & Analyzed: 02/13/18

n-Propylbenzene	ND	0.0020	mg/Kg wet							
Styrene	ND	0.0020	mg/Kg wet							
1,1,1,2-Tetrachloroethane	ND	0.0020	mg/Kg wet							
1,1,2,2-Tetrachloroethane	ND	0.0010	mg/Kg wet							
Tetrachloroethylene	ND	0.0020	mg/Kg wet							
Tetrahydrofuran	ND	0.010	mg/Kg wet							
Toluene	ND	0.0020	mg/Kg wet							
1,2,3-Trichlorobenzene	ND	0.0020	mg/Kg wet							
1,2,4-Trichlorobenzene	ND	0.0020	mg/Kg wet							
1,1,1-Trichloroethane	ND	0.0020	mg/Kg wet							
1,1,2-Trichloroethane	ND	0.0020	mg/Kg wet							
Trichloroethylene	ND	0.0020	mg/Kg wet							
Trichlorofluoromethane (Freon 11)	ND	0.010	mg/Kg wet							
1,2,3-Trichloropropane	ND	0.0020	mg/Kg wet							
1,2,4-Trimethylbenzene	ND	0.0020	mg/Kg wet							
1,3,5-Trimethylbenzene	ND	0.0020	mg/Kg wet							
Vinyl Chloride	ND	0.010	mg/Kg wet							
m+p Xylene	ND	0.0040	mg/Kg wet							
o-Xylene	ND	0.0020	mg/Kg wet							
Surrogate: 1,2-Dichloroethane-d4	0.0429		mg/Kg wet	0.0500		85.9	70-130			
Surrogate: Toluene-d8	0.0540		mg/Kg wet	0.0500		108	70-130			
Surrogate: 4-Bromofluorobenzene	0.0505		mg/Kg wet	0.0500		101	70-130			

LCS (B196724-BS1)

Prepared & Analyzed: 02/13/18

Acetone	0.216	0.10	mg/Kg wet	0.200		108	40-160			†
tert-Amyl Methyl Ether (TAME)	0.0184	0.0010	mg/Kg wet	0.0200		92.0	70-130			
Benzene	0.0220	0.0020	mg/Kg wet	0.0200		110	70-130			
Bromobenzene	0.0233	0.0020	mg/Kg wet	0.0200		117	70-130			
Bromochloromethane	0.0244	0.0020	mg/Kg wet	0.0200		122	70-130			
Bromodichloromethane	0.0201	0.0020	mg/Kg wet	0.0200		101	70-130			
Bromoform	0.0231	0.0020	mg/Kg wet	0.0200		116	70-130			
Bromomethane	0.0166	0.010	mg/Kg wet	0.0200		83.2	40-160	V-34		†
2-Butanone (MEK)	0.191	0.040	mg/Kg wet	0.200		95.4	40-160			†
n-Butylbenzene	0.0260	0.0020	mg/Kg wet	0.0200		130	70-130			
sec-Butylbenzene	0.0223	0.0020	mg/Kg wet	0.0200		111	70-130			
tert-Butylbenzene	0.0207	0.0020	mg/Kg wet	0.0200		104	70-130			
tert-Butyl Ethyl Ether (TBEE)	0.0168	0.0010	mg/Kg wet	0.0200		83.9	70-130			
Carbon Disulfide	0.0216	0.0060	mg/Kg wet	0.0200		108	70-130			
Carbon Tetrachloride	0.0173	0.0020	mg/Kg wet	0.0200		86.5	70-130	V-05		
Chlorobenzene	0.0235	0.0020	mg/Kg wet	0.0200		118	70-130			
Chlorodibromomethane	0.0211	0.0010	mg/Kg wet	0.0200		105	70-130			
Chloroethane	0.0164	0.010	mg/Kg wet	0.0200		82.1	70-130			
Chloroform	0.0211	0.0040	mg/Kg wet	0.0200		106	70-130			
Chloromethane	0.0182	0.010	mg/Kg wet	0.0200		90.8	40-160			†
2-Chlorotoluene	0.0223	0.0020	mg/Kg wet	0.0200		112	70-130			
4-Chlorotoluene	0.0228	0.0020	mg/Kg wet	0.0200		114	70-130			
1,2-Dibromo-3-chloropropane (DBCP)	0.0222	0.0020	mg/Kg wet	0.0200		111	70-130			
1,2-Dibromoethane (EDB)	0.0213	0.0010	mg/Kg wet	0.0200		107	70-130			
Dibromomethane	0.0217	0.0020	mg/Kg wet	0.0200		108	70-130			
1,2-Dichlorobenzene	0.0224	0.0020	mg/Kg wet	0.0200		112	70-130			
1,3-Dichlorobenzene	0.0244	0.0020	mg/Kg wet	0.0200		122	70-130			
1,4-Dichlorobenzene	0.0221	0.0020	mg/Kg wet	0.0200		111	70-130			

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B196724 - SW-846 5035										
LCS (B196724-BS1)				Prepared & Analyzed: 02/13/18						
Dichlorodifluoromethane (Freon 12)	0.00854	0.010	mg/Kg wet	0.0200		42.7	40-160			L-14 †
1,1-Dichloroethane	0.0240	0.0020	mg/Kg wet	0.0200		120	70-130			
1,2-Dichloroethane	0.0204	0.0020	mg/Kg wet	0.0200		102	70-130			
1,1-Dichloroethylene	0.0216	0.0040	mg/Kg wet	0.0200		108	70-130			
cis-1,2-Dichloroethylene	0.0218	0.0020	mg/Kg wet	0.0200		109	70-130			
trans-1,2-Dichloroethylene	0.0226	0.0020	mg/Kg wet	0.0200		113	70-130			
1,2-Dichloropropane	0.0229	0.0020	mg/Kg wet	0.0200		115	70-130			
1,3-Dichloropropane	0.0216	0.0010	mg/Kg wet	0.0200		108	70-130			
2,2-Dichloropropane	0.0132	0.0020	mg/Kg wet	0.0200		66.0	* 70-130			L-04, V-05
1,1-Dichloropropene	0.0215	0.0020	mg/Kg wet	0.0200		108	70-130			
cis-1,3-Dichloropropene	0.0189	0.0010	mg/Kg wet	0.0200		94.7	70-130			
trans-1,3-Dichloropropene	0.0166	0.0010	mg/Kg wet	0.0200		83.0	70-130			
Diethyl Ether	0.0214	0.010	mg/Kg wet	0.0200		107	70-130			
Diisopropyl Ether (DIPE)	0.0208	0.0010	mg/Kg wet	0.0200		104	70-130			
1,4-Dioxane	0.218	0.10	mg/Kg wet	0.200		109	40-160			V-16 †
Ethylbenzene	0.0226	0.0020	mg/Kg wet	0.0200		113	70-130			
Hexachlorobutadiene	0.0225	0.0020	mg/Kg wet	0.0200		113	70-130			
2-Hexanone (MBK)	0.217	0.020	mg/Kg wet	0.200		108	40-160			†
Isopropylbenzene (Cumene)	0.0239	0.0020	mg/Kg wet	0.0200		119	70-130			
p-Isopropyltoluene (p-Cymene)	0.0223	0.0020	mg/Kg wet	0.0200		112	70-130			
Methyl tert-Butyl Ether (MTBE)	0.0176	0.0040	mg/Kg wet	0.0200		88.0	70-130			
Methylene Chloride	0.0224	0.010	mg/Kg wet	0.0200		112	70-130			
4-Methyl-2-pentanone (MIBK)	0.202	0.020	mg/Kg wet	0.200		101	40-160			†
Naphthalene	0.0215	0.0040	mg/Kg wet	0.0200		107	70-130			
n-Propylbenzene	0.0236	0.0020	mg/Kg wet	0.0200		118	70-130			
Styrene	0.0244	0.0020	mg/Kg wet	0.0200		122	70-130			
1,1,1,2-Tetrachloroethane	0.0222	0.0020	mg/Kg wet	0.0200		111	70-130			
1,1,2,2-Tetrachloroethane	0.0255	0.0010	mg/Kg wet	0.0200		127	70-130			
Tetrachloroethylene	0.0222	0.0020	mg/Kg wet	0.0200		111	70-130			
Tetrahydrofuran	0.0221	0.010	mg/Kg wet	0.0200		110	70-130			
Toluene	0.0219	0.0020	mg/Kg wet	0.0200		109	70-130			
1,2,3-Trichlorobenzene	0.0216	0.0020	mg/Kg wet	0.0200		108	70-130			
1,2,4-Trichlorobenzene	0.0220	0.0020	mg/Kg wet	0.0200		110	70-130			
1,1,1-Trichloroethane	0.0200	0.0020	mg/Kg wet	0.0200		99.9	70-130			
1,1,2-Trichloroethane	0.0218	0.0020	mg/Kg wet	0.0200		109	70-130			
Trichloroethylene	0.0215	0.0020	mg/Kg wet	0.0200		107	70-130			
Trichlorofluoromethane (Freon 11)	0.0191	0.010	mg/Kg wet	0.0200		95.7	70-130			
1,2,3-Trichloropropane	0.0232	0.0020	mg/Kg wet	0.0200		116	70-130			
1,2,4-Trimethylbenzene	0.0207	0.0020	mg/Kg wet	0.0200		104	70-130			
1,3,5-Trimethylbenzene	0.0234	0.0020	mg/Kg wet	0.0200		117	70-130			
Vinyl Chloride	0.0198	0.010	mg/Kg wet	0.0200		99.0	70-130			
m+p Xylene	0.0454	0.0040	mg/Kg wet	0.0400		113	70-130			
o-Xylene	0.0228	0.0020	mg/Kg wet	0.0200		114	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0474		mg/Kg wet	0.0500		94.8	70-130			
Surrogate: Toluene-d8	0.0520		mg/Kg wet	0.0500		104	70-130			
Surrogate: 4-Bromofluorobenzene	0.0539		mg/Kg wet	0.0500		108	70-130			

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B196724 - SW-846 5035										
LCS Dup (B196724-BSD1)				Prepared & Analyzed: 02/13/18						
Acetone	0.206	0.10	mg/Kg wet	0.200		103	40-160	4.82	20	†
tert-Amyl Methyl Ether (TAME)	0.0186	0.0010	mg/Kg wet	0.0200		93.1	70-130	1.19	20	
Benzene	0.0229	0.0020	mg/Kg wet	0.0200		115	70-130	4.09	20	
Bromobenzene	0.0226	0.0020	mg/Kg wet	0.0200		113	70-130	3.40	20	
Bromochloromethane	0.0251	0.0020	mg/Kg wet	0.0200		126	70-130	2.82	20	
Bromodichloromethane	0.0214	0.0020	mg/Kg wet	0.0200		107	70-130	6.07	20	
Bromoform	0.0224	0.0020	mg/Kg wet	0.0200		112	70-130	3.08	20	
Bromomethane	0.0175	0.010	mg/Kg wet	0.0200		87.7	40-160	5.27	20	V-34 †
2-Butanone (MEK)	0.195	0.040	mg/Kg wet	0.200		97.6	40-160	2.30	20	†
n-Butylbenzene	0.0252	0.0020	mg/Kg wet	0.0200		126	70-130	3.05	20	
sec-Butylbenzene	0.0216	0.0020	mg/Kg wet	0.0200		108	70-130	3.01	20	
tert-Butylbenzene	0.0201	0.0020	mg/Kg wet	0.0200		100	70-130	3.23	20	
tert-Butyl Ethyl Ether (TBEE)	0.0178	0.0010	mg/Kg wet	0.0200		89.1	70-130	6.01	20	
Carbon Disulfide	0.0214	0.0060	mg/Kg wet	0.0200		107	70-130	1.21	20	
Carbon Tetrachloride	0.0171	0.0020	mg/Kg wet	0.0200		85.7	70-130	0.929	20	V-05
Chlorobenzene	0.0241	0.0020	mg/Kg wet	0.0200		120	70-130	2.18	20	
Chlorodibromomethane	0.0212	0.0010	mg/Kg wet	0.0200		106	70-130	0.568	20	
Chloroethane	0.0188	0.010	mg/Kg wet	0.0200		93.8	70-130	13.3	20	
Chloroform	0.0223	0.0040	mg/Kg wet	0.0200		112	70-130	5.71	20	
Chloromethane	0.0181	0.010	mg/Kg wet	0.0200		90.3	40-160	0.552	20	†
2-Chlorotoluene	0.0220	0.0020	mg/Kg wet	0.0200		110	70-130	1.44	20	
4-Chlorotoluene	0.0226	0.0020	mg/Kg wet	0.0200		113	70-130	0.970	20	
1,2-Dibromo-3-chloropropane (DBCP)	0.0210	0.0020	mg/Kg wet	0.0200		105	70-130	5.84	20	
1,2-Dibromoethane (EDB)	0.0228	0.0010	mg/Kg wet	0.0200		114	70-130	6.62	20	
Dibromomethane	0.0225	0.0020	mg/Kg wet	0.0200		112	70-130	3.53	20	
1,2-Dichlorobenzene	0.0222	0.0020	mg/Kg wet	0.0200		111	70-130	1.26	20	
1,3-Dichlorobenzene	0.0234	0.0020	mg/Kg wet	0.0200		117	70-130	3.93	20	
1,4-Dichlorobenzene	0.0218	0.0020	mg/Kg wet	0.0200		109	70-130	1.55	20	
Dichlorodifluoromethane (Freon 12)	0.00858	0.010	mg/Kg wet	0.0200		42.9	40-160	0.467	20	L-14 †
1,1-Dichloroethane	0.0239	0.0020	mg/Kg wet	0.0200		120	70-130	0.167	20	
1,2-Dichloroethane	0.0216	0.0020	mg/Kg wet	0.0200		108	70-130	5.81	20	
1,1-Dichloroethylene	0.0221	0.0040	mg/Kg wet	0.0200		111	70-130	2.38	20	
cis-1,2-Dichloroethylene	0.0224	0.0020	mg/Kg wet	0.0200		112	70-130	2.62	20	
trans-1,2-Dichloroethylene	0.0231	0.0020	mg/Kg wet	0.0200		116	70-130	2.45	20	
1,2-Dichloropropane	0.0242	0.0020	mg/Kg wet	0.0200		121	70-130	5.18	20	
1,3-Dichloropropane	0.0218	0.0010	mg/Kg wet	0.0200		109	70-130	0.737	20	
2,2-Dichloropropane	0.0132	0.0020	mg/Kg wet	0.0200		65.8	* 70-130	0.303	20	L-04, V-05
1,1-Dichloropropene	0.0224	0.0020	mg/Kg wet	0.0200		112	70-130	3.92	20	
cis-1,3-Dichloropropene	0.0193	0.0010	mg/Kg wet	0.0200		96.3	70-130	1.68	20	
trans-1,3-Dichloropropene	0.0177	0.0010	mg/Kg wet	0.0200		88.7	70-130	6.64	20	
Diethyl Ether	0.0212	0.010	mg/Kg wet	0.0200		106	70-130	0.846	20	
Diisopropyl Ether (DIPE)	0.0213	0.0010	mg/Kg wet	0.0200		106	70-130	2.38	20	
1,4-Dioxane	0.261	0.10	mg/Kg wet	0.200		131	40-160	18.2	20	V-16 †
Ethylbenzene	0.0234	0.0020	mg/Kg wet	0.0200		117	70-130	3.30	20	
Hexachlorobutadiene	0.0223	0.0020	mg/Kg wet	0.0200		112	70-130	0.892	20	
2-Hexanone (MBK)	0.224	0.020	mg/Kg wet	0.200		112	40-160	3.39	20	†
Isopropylbenzene (Cumene)	0.0241	0.0020	mg/Kg wet	0.0200		120	70-130	1.00	20	
p-Isopropyltoluene (p-Cymene)	0.0219	0.0020	mg/Kg wet	0.0200		110	70-130	1.81	20	
Methyl tert-Butyl Ether (MTBE)	0.0183	0.0040	mg/Kg wet	0.0200		91.3	70-130	3.68	20	
Methylene Chloride	0.0212	0.010	mg/Kg wet	0.0200		106	70-130	5.23	20	
4-Methyl-2-pentanone (MIBK)	0.213	0.020	mg/Kg wet	0.200		106	40-160	5.40	20	†
Naphthalene	0.0217	0.0040	mg/Kg wet	0.0200		108	70-130	1.02	20	

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QUALITY CONTROL
Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B196724 - SW-846 5035										
LCS Dup (B196724-BSD1)				Prepared & Analyzed: 02/13/18						
n-Propylbenzene	0.0238	0.0020	mg/Kg wet	0.0200		119	70-130	0.590	20	
Styrene	0.0243	0.0020	mg/Kg wet	0.0200		121	70-130	0.493	20	
1,1,1,2-Tetrachloroethane	0.0222	0.0020	mg/Kg wet	0.0200		111	70-130	0.180	20	
1,1,2,2-Tetrachloroethane	0.0254	0.0010	mg/Kg wet	0.0200		127	70-130	0.315	20	
Tetrachloroethylene	0.0234	0.0020	mg/Kg wet	0.0200		117	70-130	5.26	20	
Tetrahydrofuran	0.0206	0.010	mg/Kg wet	0.0200		103	70-130	7.03	20	
Toluene	0.0223	0.0020	mg/Kg wet	0.0200		112	70-130	2.08	20	
1,2,3-Trichlorobenzene	0.0214	0.0020	mg/Kg wet	0.0200		107	70-130	1.21	20	
1,2,4-Trichlorobenzene	0.0221	0.0020	mg/Kg wet	0.0200		110	70-130	0.272	20	
1,1,1-Trichloroethane	0.0198	0.0020	mg/Kg wet	0.0200		99.2	70-130	0.703	20	
1,1,2-Trichloroethane	0.0224	0.0020	mg/Kg wet	0.0200		112	70-130	2.71	20	
Trichloroethylene	0.0222	0.0020	mg/Kg wet	0.0200		111	70-130	3.30	20	
Trichlorofluoromethane (Freon 11)	0.0186	0.010	mg/Kg wet	0.0200		92.8	70-130	3.08	20	
1,2,3-Trichloropropane	0.0223	0.0020	mg/Kg wet	0.0200		112	70-130	3.78	20	
1,2,4-Trimethylbenzene	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130	2.25	20	
1,3,5-Trimethylbenzene	0.0233	0.0020	mg/Kg wet	0.0200		116	70-130	0.600	20	
Vinyl Chloride	0.0196	0.010	mg/Kg wet	0.0200		98.0	70-130	1.02	20	
m+p Xylene	0.0458	0.0040	mg/Kg wet	0.0400		114	70-130	0.834	20	
o-Xylene	0.0225	0.0020	mg/Kg wet	0.0200		113	70-130	1.15	20	
Surrogate: 1,2-Dichloroethane-d4	0.0485		mg/Kg wet	0.0500		97.0	70-130			
Surrogate: Toluene-d8	0.0529		mg/Kg wet	0.0500		106	70-130			
Surrogate: 4-Bromofluorobenzene	0.0528		mg/Kg wet	0.0500		106	70-130			

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QUALITY CONTROL
Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B196770 - SW-846 5030B
Blank (B196770-BLK1)

Prepared: 02/13/18 Analyzed: 02/14/18

Acetone	ND	50	µg/L							
tert-Amyl Methyl Ether (TAME)	ND	0.50	µg/L							
Benzene	ND	1.0	µg/L							
tert-Butyl Alcohol (TBA)	ND	20	µg/L							
Carbon Tetrachloride	ND	2.0	µg/L							
1,2-Dichlorobenzene	ND	2.0	µg/L							
1,3-Dichlorobenzene	ND	2.0	µg/L							
1,4-Dichlorobenzene	ND	2.0	µg/L							
1,2-Dichloroethane	ND	2.0	µg/L							
cis-1,2-Dichloroethylene	ND	1.0	µg/L							
1,1-Dichloroethane	ND	2.0	µg/L							
1,1-Dichloroethylene	ND	2.0	µg/L							
1,4-Dioxane	ND	50	µg/L							
Ethylbenzene	ND	2.0	µg/L							
Methyl tert-Butyl Ether (MTBE)	ND	2.0	µg/L							
Methylene Chloride	ND	5.0	µg/L							
Tetrachloroethylene	ND	2.0	µg/L							
Toluene	ND	1.0	µg/L							
1,1,1-Trichloroethane	ND	2.0	µg/L							
1,1,2-Trichloroethane	ND	2.0	µg/L							
Trichloroethylene	ND	2.0	µg/L							
Vinyl Chloride	ND	2.0	µg/L							
m+p Xylene	ND	2.0	µg/L							
o-Xylene	ND	2.0	µg/L							
Surrogate: 1,2-Dichloroethane-d4	24.0		µg/L	25.0		95.8	70-130			
Surrogate: Toluene-d8	25.0		µg/L	25.0		100	70-130			
Surrogate: 4-Bromofluorobenzene	23.2		µg/L	25.0		92.6	70-130			

LCS (B196770-BS1)

Prepared: 02/13/18 Analyzed: 02/14/18

Acetone	150	50	µg/L	200		75.0	70-160			†
tert-Amyl Methyl Ether (TAME)	20.4	0.50	µg/L	20.0		102	70-130			
Benzene	20.9	1.0	µg/L	20.0		104	37-151			
tert-Butyl Alcohol (TBA)	173	20	µg/L	200		86.4	40-160			†
Carbon Tetrachloride	19.9	2.0	µg/L	20.0		99.4	70-140			
1,2-Dichlorobenzene	19.7	2.0	µg/L	20.0		98.6	18-190			
1,3-Dichlorobenzene	20.4	2.0	µg/L	20.0		102	59-156			
1,4-Dichlorobenzene	19.6	2.0	µg/L	20.0		97.9	18-190			
1,2-Dichloroethane	16.8	2.0	µg/L	20.0		84.2	49-155			
cis-1,2-Dichloroethylene	20.8	1.0	µg/L	20.0		104	70-130			
1,1-Dichloroethane	19.2	2.0	µg/L	20.0		96.1	59-155			
1,1-Dichloroethylene	17.8	2.0	µg/L	20.0		88.9	20-234			
1,4-Dioxane	198	50	µg/L	200		99.2	40-130			†
Ethylbenzene	20.5	2.0	µg/L	20.0		102	37-162			
Methyl tert-Butyl Ether (MTBE)	19.4	2.0	µg/L	20.0		97.2	70-130			
Methylene Chloride	18.6	5.0	µg/L	20.0		92.8	50-221			
Tetrachloroethylene	20.3	2.0	µg/L	20.0		102	64-148			
Toluene	19.8	1.0	µg/L	20.0		99.0	47-150			
1,1,1-Trichloroethane	20.0	2.0	µg/L	20.0		100	52-162			
1,1,2-Trichloroethane	20.4	2.0	µg/L	20.0		102	52-150			
Trichloroethylene	20.1	2.0	µg/L	20.0		100	71-157			
Vinyl Chloride	8.70	2.0	µg/L	20.0		43.5	20-251			
m+p Xylene	40.4	2.0	µg/L	40.0		101	70-130			

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QUALITY CONTROL
Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B196770 - SW-846 5030B
LCS (B196770-BS1)

Prepared: 02/13/18 Analyzed: 02/14/18

o-Xylene	19.9	2.0	µg/L	20.0		99.4	70-130			
Surrogate: 1,2-Dichloroethane-d4	24.2		µg/L	25.0		96.8	70-130			
Surrogate: Toluene-d8	24.8		µg/L	25.0		99.0	70-130			
Surrogate: 4-Bromofluorobenzene	24.0		µg/L	25.0		96.1	70-130			

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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B196704 - SW-846 3546										
Blank (B196704-BLK1)				Prepared & Analyzed: 02/13/18						
Acenaphthene	ND	0.17	mg/Kg wet							
Acenaphthylene	ND	0.17	mg/Kg wet							
Acetophenone	ND	0.34	mg/Kg wet							
Aniline	ND	0.34	mg/Kg wet							L-04, V-34
Anthracene	ND	0.17	mg/Kg wet							
Benzo(a)anthracene	ND	0.17	mg/Kg wet							
Benzo(a)pyrene	ND	0.17	mg/Kg wet							
Benzo(b)fluoranthene	ND	0.17	mg/Kg wet							
Benzo(g,h,i)perylene	ND	0.17	mg/Kg wet							R-05, V-20
Benzo(k)fluoranthene	ND	0.17	mg/Kg wet							
Bis(2-chloroethoxy)methane	ND	0.34	mg/Kg wet							
Bis(2-chloroethyl)ether	ND	0.34	mg/Kg wet							
Bis(2-chloroisopropyl)ether	ND	0.34	mg/Kg wet							
Bis(2-Ethylhexyl)phthalate	ND	0.34	mg/Kg wet							
4-Bromophenylphenylether	ND	0.34	mg/Kg wet							
Butylbenzylphthalate	ND	0.34	mg/Kg wet							R-05
4-Chloroaniline	ND	0.66	mg/Kg wet							V-34
2-Chloronaphthalene	ND	0.34	mg/Kg wet							
2-Chlorophenol	ND	0.34	mg/Kg wet							
Chrysene	ND	0.17	mg/Kg wet							
Dibenz(a,h)anthracene	ND	0.17	mg/Kg wet							
Dibenzofuran	ND	0.34	mg/Kg wet							
Di-n-butylphthalate	ND	0.34	mg/Kg wet							V-20
1,2-Dichlorobenzene	ND	0.34	mg/Kg wet							
1,3-Dichlorobenzene	ND	0.34	mg/Kg wet							
1,4-Dichlorobenzene	ND	0.34	mg/Kg wet							
3,3-Dichlorobenzidine	ND	0.17	mg/Kg wet							V-34
2,4-Dichlorophenol	ND	0.34	mg/Kg wet							
Diethylphthalate	ND	0.34	mg/Kg wet							
2,4-Dimethylphenol	ND	0.34	mg/Kg wet							
Dimethylphthalate	ND	0.34	mg/Kg wet							V-20
2,4-Dinitrophenol	ND	0.66	mg/Kg wet							V-04
2,4-Dinitrotoluene	ND	0.34	mg/Kg wet							
2,6-Dinitrotoluene	ND	0.34	mg/Kg wet							
Di-n-octylphthalate	ND	0.34	mg/Kg wet							V-20
1,2-Diphenylhydrazine (as Azobenzene)	ND	0.34	mg/Kg wet							
Fluoranthene	ND	0.17	mg/Kg wet							
Fluorene	ND	0.17	mg/Kg wet							
Hexachlorobenzene	ND	0.34	mg/Kg wet							
Hexachlorobutadiene	ND	0.34	mg/Kg wet							
Hexachloroethane	ND	0.34	mg/Kg wet							
Indeno(1,2,3-cd)pyrene	ND	0.17	mg/Kg wet							
Isophorone	ND	0.34	mg/Kg wet							
2-Methylnaphthalene	ND	0.17	mg/Kg wet							
2-Methylphenol	ND	0.34	mg/Kg wet							
3/4-Methylphenol	ND	0.34	mg/Kg wet							
Naphthalene	ND	0.17	mg/Kg wet							
Nitrobenzene	ND	0.34	mg/Kg wet							
2-Nitrophenol	ND	0.34	mg/Kg wet							
4-Nitrophenol	ND	0.66	mg/Kg wet							
Pentachlorophenol	ND	0.34	mg/Kg wet							
Phenanthrene	ND	0.17	mg/Kg wet							

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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B196704 - SW-846 3546										
Blank (B196704-BLK1)										
Prepared & Analyzed: 02/13/18										
Phenol	ND	0.34	mg/Kg wet							
Pyrene	ND	0.17	mg/Kg wet							R-05
1,2,4-Trichlorobenzene	ND	0.34	mg/Kg wet							
2,4,5-Trichlorophenol	ND	0.34	mg/Kg wet							
2,4,6-Trichlorophenol	ND	0.34	mg/Kg wet							
Surrogate: 2-Fluorophenol	4.08		mg/Kg wet	6.67		61.2	30-130			
Surrogate: Phenol-d6	4.24		mg/Kg wet	6.67		63.5	30-130			
Surrogate: Nitrobenzene-d5	2.33		mg/Kg wet	3.33		70.0	30-130			
Surrogate: 2-Fluorobiphenyl	2.19		mg/Kg wet	3.33		65.7	30-130			
Surrogate: 2,4,6-Tribromophenol	3.47		mg/Kg wet	6.67		52.1	30-130			
Surrogate: p-Terphenyl-d14	3.02		mg/Kg wet	3.33		90.7	30-130			
LCS (B196704-BS1)										
Prepared & Analyzed: 02/13/18										
Acenaphthene	0.944	0.17	mg/Kg wet	1.67		56.7	40-140			
Acenaphthylene	0.910	0.17	mg/Kg wet	1.67		54.6	40-140			
Acetophenone	0.887	0.34	mg/Kg wet	1.67		53.2	40-140			
Aniline	0.611	0.34	mg/Kg wet	1.67		36.6 *	40-140			L-04, V-34
Anthracene	1.01	0.17	mg/Kg wet	1.67		60.4	40-140			
Benzo(a)anthracene	0.962	0.17	mg/Kg wet	1.67		57.7	40-140			
Benzo(a)pyrene	0.994	0.17	mg/Kg wet	1.67		59.7	40-140			
Benzo(b)fluoranthene	1.10	0.17	mg/Kg wet	1.67		66.2	40-140			
Benzo(g,h,i)perylene	1.09	0.17	mg/Kg wet	1.67		65.5	40-140			R-05, V-06
Benzo(k)fluoranthene	1.19	0.17	mg/Kg wet	1.67		71.5	40-140			
Bis(2-chloroethoxy)methane	1.08	0.34	mg/Kg wet	1.67		64.5	40-140			
Bis(2-chloroethyl)ether	0.994	0.34	mg/Kg wet	1.67		59.6	40-140			
Bis(2-chloroisopropyl)ether	0.983	0.34	mg/Kg wet	1.67		59.0	40-140			
Bis(2-Ethylhexyl)phthalate	0.991	0.34	mg/Kg wet	1.67		59.5	40-140			
4-Bromophenylphenylether	1.02	0.34	mg/Kg wet	1.67		61.2	40-140			
Butylbenzylphthalate	0.832	0.34	mg/Kg wet	1.67		49.9	40-140			R-05
4-Chloroaniline	0.539	0.66	mg/Kg wet	1.67		32.3	15-140			V-34 †
2-Chloronaphthalene	0.864	0.34	mg/Kg wet	1.67		51.8	40-140			
2-Chlorophenol	0.937	0.34	mg/Kg wet	1.67		56.2	30-130			
Chrysene	0.932	0.17	mg/Kg wet	1.67		55.9	40-140			
Dibenz(a,h)anthracene	0.988	0.17	mg/Kg wet	1.67		59.3	40-140			
Dibenzofuran	0.955	0.34	mg/Kg wet	1.67		57.3	40-140			
Di-n-butylphthalate	1.18	0.34	mg/Kg wet	1.67		71.0	40-140			V-06
1,2-Dichlorobenzene	0.857	0.34	mg/Kg wet	1.67		51.4	40-140			
1,3-Dichlorobenzene	0.807	0.34	mg/Kg wet	1.67		48.4	40-140			
1,4-Dichlorobenzene	0.782	0.34	mg/Kg wet	1.67		46.9	40-140			
3,3-Dichlorobenzidine	0.702	0.17	mg/Kg wet	1.67		42.1	40-140			V-34
2,4-Dichlorophenol	0.898	0.34	mg/Kg wet	1.67		53.9	30-130			
Diethylphthalate	0.988	0.34	mg/Kg wet	1.67		59.3	40-140			
2,4-Dimethylphenol	1.02	0.34	mg/Kg wet	1.67		61.2	30-130			
Dimethylphthalate	0.999	0.34	mg/Kg wet	1.67		59.9	40-140			V-06
2,4-Dinitrophenol	0.261	0.66	mg/Kg wet	1.67		15.7	15-140			V-04 †
2,4-Dinitrotoluene	0.945	0.34	mg/Kg wet	1.67		56.7	40-140			
2,6-Dinitrotoluene	0.993	0.34	mg/Kg wet	1.67		59.6	40-140			
Di-n-octylphthalate	1.30	0.34	mg/Kg wet	1.67		78.1	40-140			V-06
1,2-Diphenylhydrazine (as Azobenzene)	1.11	0.34	mg/Kg wet	1.67		66.6	40-140			
Fluoranthene	1.15	0.17	mg/Kg wet	1.67		69.1	40-140			
Fluorene	0.922	0.17	mg/Kg wet	1.67		55.3	40-140			
Hexachlorobenzene	0.969	0.34	mg/Kg wet	1.67		58.2	40-140			

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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B196704 - SW-846 3546										
LCS (B196704-BS1)										
Prepared & Analyzed: 02/13/18										
Hexachlorobutadiene	0.848	0.34	mg/Kg wet	1.67		50.9	40-140			
Hexachloroethane	0.790	0.34	mg/Kg wet	1.67		47.4	40-140			
Indeno(1,2,3-cd)pyrene	1.03	0.17	mg/Kg wet	1.67		61.8	40-140			
Isophorone	1.11	0.34	mg/Kg wet	1.67		66.6	40-140			
2-Methylnaphthalene	0.923	0.17	mg/Kg wet	1.67		55.4	40-140			
2-Methylphenol	0.870	0.34	mg/Kg wet	1.67		52.2	30-130			
3/4-Methylphenol	0.913	0.34	mg/Kg wet	1.67		54.8	30-130			
Naphthalene	0.879	0.17	mg/Kg wet	1.67		52.7	40-140			
Nitrobenzene	0.914	0.34	mg/Kg wet	1.67		54.9	40-140			
2-Nitrophenol	0.980	0.34	mg/Kg wet	1.67		58.8	30-130			
4-Nitrophenol	1.11	0.66	mg/Kg wet	1.67		66.7	15-140			†
Pentachlorophenol	0.859	0.34	mg/Kg wet	1.67		51.5	30-130			
Phenanthrene	0.998	0.17	mg/Kg wet	1.67		59.9	40-140			
Phenol	0.972	0.34	mg/Kg wet	1.67		58.3	15-140			†
Pyrene	0.837	0.17	mg/Kg wet	1.67		50.2	40-140			R-05
1,2,4-Trichlorobenzene	0.888	0.34	mg/Kg wet	1.67		53.3	40-140			
2,4,5-Trichlorophenol	0.904	0.34	mg/Kg wet	1.67		54.2	30-130			
2,4,6-Trichlorophenol	0.978	0.34	mg/Kg wet	1.67		58.7	30-130			
Surrogate: 2-Fluorophenol	4.39		mg/Kg wet	6.67		65.8	30-130			
Surrogate: Phenol-d6	3.93		mg/Kg wet	6.67		59.0	30-130			
Surrogate: Nitrobenzene-d5	2.00		mg/Kg wet	3.33		59.9	30-130			
Surrogate: 2-Fluorobiphenyl	2.17		mg/Kg wet	3.33		65.2	30-130			
Surrogate: 2,4,6-Tribromophenol	3.93		mg/Kg wet	6.67		59.0	30-130			
Surrogate: p-Terphenyl-d14	1.72		mg/Kg wet	3.33		51.7	30-130			
LCS Dup (B196704-BSD1)										
Prepared & Analyzed: 02/13/18										
Acenaphthene	0.963	0.17	mg/Kg wet	1.67		57.8	40-140	1.96	30	
Acenaphthylene	0.924	0.17	mg/Kg wet	1.67		55.4	40-140	1.53	30	
Acetophenone	0.921	0.34	mg/Kg wet	1.67		55.3	40-140	3.83	30	
Aniline	0.510	0.34	mg/Kg wet	1.67		30.6	* 40-140	18.0	30	V-34, L-04
Anthracene	0.984	0.17	mg/Kg wet	1.67		59.0	40-140	2.31	30	
Benzo(a)anthracene	0.993	0.17	mg/Kg wet	1.67		59.6	40-140	3.21	30	
Benzo(a)pyrene	1.00	0.17	mg/Kg wet	1.67		60.2	40-140	0.835	30	
Benzo(b)fluoranthene	0.988	0.17	mg/Kg wet	1.67		59.3	40-140	11.0	30	
Benzo(g,h,i)perylene	0.730	0.17	mg/Kg wet	1.67		43.8	40-140	39.7	* 30	R-05, V-06
Benzo(k)fluoranthene	0.981	0.17	mg/Kg wet	1.67		58.8	40-140	19.5	30	
Bis(2-chloroethoxy)methane	0.915	0.34	mg/Kg wet	1.67		54.9	40-140	16.1	30	
Bis(2-chloroethyl)ether	0.863	0.34	mg/Kg wet	1.67		51.8	40-140	14.0	30	
Bis(2-chloroisopropyl)ether	1.00	0.34	mg/Kg wet	1.67		60.0	40-140	1.75	30	
Bis(2-Ethylhexyl)phthalate	1.17	0.34	mg/Kg wet	1.67		70.3	40-140	16.6	30	
4-Bromophenylphenylether	1.05	0.34	mg/Kg wet	1.67		62.8	40-140	2.48	30	
Butylbenzylphthalate	1.36	0.34	mg/Kg wet	1.67		81.4	40-140	48.0	* 30	R-05
4-Chloroaniline	0.531	0.66	mg/Kg wet	1.67		31.9	15-140	1.50	30	V-34 †
2-Chloronaphthalene	0.839	0.34	mg/Kg wet	1.67		50.3	40-140	2.90	30	
2-Chlorophenol	0.806	0.34	mg/Kg wet	1.67		48.4	30-130	15.0	30	
Chrysene	0.956	0.17	mg/Kg wet	1.67		57.4	40-140	2.61	30	
Dibenz(a,h)anthracene	0.799	0.17	mg/Kg wet	1.67		47.9	40-140	21.2	30	
Dibenzofuran	0.970	0.34	mg/Kg wet	1.67		58.2	40-140	1.56	30	
Di-n-butylphthalate	1.11	0.34	mg/Kg wet	1.67		66.7	40-140	6.30	30	V-06
1,2-Dichlorobenzene	0.801	0.34	mg/Kg wet	1.67		48.1	40-140	6.71	30	
1,3-Dichlorobenzene	0.694	0.34	mg/Kg wet	1.67		41.6	40-140	15.1	30	
1,4-Dichlorobenzene	0.778	0.34	mg/Kg wet	1.67		46.7	40-140	0.556	30	

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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B196704 - SW-846 3546

LCS Dup (B196704-BSD1)

Prepared & Analyzed: 02/13/18

3,3-Dichlorobenzidine	0.681	0.17	mg/Kg wet	1.67		40.9	40-140	3.04	30	V-34
2,4-Dichlorophenol	0.839	0.34	mg/Kg wet	1.67		50.3	30-130	6.76	30	
Diethylphthalate	1.05	0.34	mg/Kg wet	1.67		63.3	40-140	6.53	30	
2,4-Dimethylphenol	0.849	0.34	mg/Kg wet	1.67		51.0	30-130	18.2	30	
Dimethylphthalate	1.06	0.34	mg/Kg wet	1.67		63.5	40-140	5.77	30	V-06
2,4-Dinitrophenol	0.238	0.66	mg/Kg wet	1.67		14.3 *	15-140	9.49	30	L-07, V-04 †
2,4-Dinitrotoluene	1.00	0.34	mg/Kg wet	1.67		60.0	40-140	5.69	30	
2,6-Dinitrotoluene	1.02	0.34	mg/Kg wet	1.67		61.0	40-140	2.32	30	
Di-n-octylphthalate	1.11	0.34	mg/Kg wet	1.67		66.4	40-140	16.3	30	V-06
1,2-Diphenylhydrazine (as Azobenzene)	1.17	0.34	mg/Kg wet	1.67		70.4	40-140	5.63	30	
Fluoranthene	1.00	0.17	mg/Kg wet	1.67		60.0	40-140	14.0	30	
Fluorene	0.939	0.17	mg/Kg wet	1.67		56.3	40-140	1.79	30	
Hexachlorobenzene	0.996	0.34	mg/Kg wet	1.67		59.7	40-140	2.68	30	
Hexachlorobutadiene	0.805	0.34	mg/Kg wet	1.67		48.3	40-140	5.20	30	
Hexachloroethane	0.837	0.34	mg/Kg wet	1.67		50.2	40-140	5.82	30	
Indeno(1,2,3-cd)pyrene	0.781	0.17	mg/Kg wet	1.67		46.9	40-140	27.4	30	
Isophorone	0.950	0.34	mg/Kg wet	1.67		57.0	40-140	15.4	30	
2-Methylnaphthalene	0.848	0.17	mg/Kg wet	1.67		50.9	40-140	8.47	30	
2-Methylphenol	0.924	0.34	mg/Kg wet	1.67		55.4	30-130	6.02	30	
3/4-Methylphenol	0.979	0.34	mg/Kg wet	1.67		58.8	30-130	7.01	30	
Naphthalene	0.853	0.17	mg/Kg wet	1.67		51.2	40-140	2.96	30	
Nitrobenzene	0.870	0.34	mg/Kg wet	1.67		52.2	40-140	4.97	30	
2-Nitrophenol	0.731	0.34	mg/Kg wet	1.67		43.9	30-130	29.1	30	
4-Nitrophenol	1.04	0.66	mg/Kg wet	1.67		62.3	15-140	6.73	30	†
Pentachlorophenol	0.772	0.34	mg/Kg wet	1.67		46.3	30-130	10.6	30	
Phenanthrene	0.982	0.17	mg/Kg wet	1.67		58.9	40-140	1.65	30	
Phenol	0.891	0.34	mg/Kg wet	1.67		53.4	15-140	8.77	30	†
Pyrene	1.15	0.17	mg/Kg wet	1.67		69.2	40-140	31.8 *	30	R-05
1,2,4-Trichlorobenzene	0.768	0.34	mg/Kg wet	1.67		46.1	40-140	14.5	30	
2,4,5-Trichlorophenol	0.876	0.34	mg/Kg wet	1.67		52.6	30-130	3.07	30	
2,4,6-Trichlorophenol	0.972	0.34	mg/Kg wet	1.67		58.3	30-130	0.616	30	
Surrogate: 2-Fluorophenol	3.67		mg/Kg wet	6.67		55.1	30-130			
Surrogate: Phenol-d6	3.81		mg/Kg wet	6.67		57.2	30-130			
Surrogate: Nitrobenzene-d5	1.92		mg/Kg wet	3.33		57.7	30-130			
Surrogate: 2-Fluorobiphenyl	2.07		mg/Kg wet	3.33		62.2	30-130			
Surrogate: 2,4,6-Tribromophenol	3.96		mg/Kg wet	6.67		59.4	30-130			
Surrogate: p-Terphenyl-d14	2.61		mg/Kg wet	3.33		78.4	30-130			

Batch B196787 - SW-846 3510C

Blank (B196787-BLK1)

Prepared & Analyzed: 02/13/18

Benzo(a)anthracene	ND	0.050	µg/L							
Benzo(a)pyrene	ND	0.10	µg/L							
Benzo(b)fluoranthene	ND	0.050	µg/L							
Benzo(k)fluoranthene	ND	0.20	µg/L							
Bis(2-Ethylhexyl)phthalate	0.10	1.0	µg/L							Ja
Chrysene	ND	0.20	µg/L							
Dibenz(a,h)anthracene	ND	0.20	µg/L							
Indeno(1,2,3-cd)pyrene	ND	0.20	µg/L							
Pentachlorophenol	ND	1.0	µg/L							
Surrogate: 2-Fluorophenol	120		µg/L	200		59.8	15-110			
Surrogate: Phenol-d6	79.8		µg/L	200		39.9	15-110			

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QUALITY CONTROL
Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B196787 - SW-846 3510C										
Blank (B196787-BLK1)										
Prepared & Analyzed: 02/13/18										
Surrogate: Nitrobenzene-d5	77.0		µg/L	100		77.0	30-130			
Surrogate: 2-Fluorobiphenyl	76.2		µg/L	100		76.2	30-130			
Surrogate: 2,4,6-Tribromophenol	198		µg/L	200		98.9	15-110			
Surrogate: p-Terphenyl-d14	63.2		µg/L	100		63.2	30-130			
LCS (B196787-BS1)										
Prepared & Analyzed: 02/13/18										
Benzo(a)anthracene	41.4	1.2	µg/L	50.0		82.8	40-140			
Benzo(a)pyrene	43.9	2.5	µg/L	50.0		87.8	40-140			
Benzo(b)fluoranthene	43.1	1.2	µg/L	50.0		86.2	40-140			
Benzo(k)fluoranthene	43.4	5.0	µg/L	50.0		86.7	40-140			
Bis(2-Ethylhexyl)phthalate	50.0	25	µg/L	50.0		100	40-140			
Chrysene	37.5	5.0	µg/L	50.0		75.0	40-140			
Dibenz(a,h)anthracene	48.5	5.0	µg/L	50.0		97.0	40-140			
Indeno(1,2,3-cd)pyrene	46.6	5.0	µg/L	50.0		93.2	40-140			
Pentachlorophenol	39.7	25	µg/L	50.0		79.4	30-130			
Surrogate: 2-Fluorophenol	124		µg/L	200		61.8	15-110			
Surrogate: Phenol-d6	85.0		µg/L	200		42.5	15-110			
Surrogate: Nitrobenzene-d5	84.2		µg/L	100		84.2	30-130			
Surrogate: 2-Fluorobiphenyl	92.6		µg/L	100		92.6	30-130			
Surrogate: 2,4,6-Tribromophenol	207		µg/L	200		103	15-110			
Surrogate: p-Terphenyl-d14	66.0		µg/L	100		66.0	30-130			
LCS Dup (B196787-BSD1)										
Prepared & Analyzed: 02/13/18										
Benzo(a)anthracene	43.9	1.2	µg/L	50.0		87.8	40-140	5.87	20	
Benzo(a)pyrene	47.2	2.5	µg/L	50.0		94.4	40-140	7.30	20	
Benzo(b)fluoranthene	46.6	1.2	µg/L	50.0		93.3	40-140	7.85	20	
Benzo(k)fluoranthene	47.2	5.0	µg/L	50.0		94.4	40-140	8.50	20	
Bis(2-Ethylhexyl)phthalate	53.7	25	µg/L	50.0		107	40-140	7.09	20	
Chrysene	40.1	5.0	µg/L	50.0		80.2	40-140	6.70	20	
Dibenz(a,h)anthracene	52.2	5.0	µg/L	50.0		104	40-140	7.50	20	
Indeno(1,2,3-cd)pyrene	49.8	5.0	µg/L	50.0		99.6	40-140	6.69	50	‡
Pentachlorophenol	42.2	25	µg/L	50.0		84.4	30-130	6.11	50	‡
Surrogate: 2-Fluorophenol	133		µg/L	200		66.3	15-110			
Surrogate: Phenol-d6	90.7		µg/L	200		45.3	15-110			
Surrogate: Nitrobenzene-d5	91.3		µg/L	100		91.3	30-130			
Surrogate: 2-Fluorobiphenyl	99.1		µg/L	100		99.1	30-130			
Surrogate: 2,4,6-Tribromophenol	219		µg/L	200		109	15-110			
Surrogate: p-Terphenyl-d14	71.3		µg/L	100		71.3	30-130			

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QUALITY CONTROL

Semivolatile Organic Compounds by - GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B196705 - SW-846 3510C										
Blank (B196705-BLK1)				Prepared & Analyzed: 02/13/18						
Acenaphthene	ND	5.0	µg/L							
Acenaphthylene	ND	5.0	µg/L							
Anthracene	ND	5.0	µg/L							
Benzidine	ND	20	µg/L							V-05
Benzo(g,h,i)perylene	ND	5.0	µg/L							V-20
4-Bromophenylphenylether	ND	10	µg/L							
Butylbenzylphthalate	ND	10	µg/L							
4-Chloro-3-methylphenol	ND	10	µg/L							
Bis(2-chloroethyl)ether	ND	10	µg/L							
Bis(2-chloroisopropyl)ether	ND	10	µg/L							
2-Chloronaphthalene	ND	10	µg/L							
2-Chlorophenol	ND	10	µg/L							
4-Chlorophenylphenylether	ND	10	µg/L							
Di-n-butylphthalate	ND	10	µg/L							V-20
1,3-Dichlorobenzene	ND	5.0	µg/L							
1,4-Dichlorobenzene	ND	5.0	µg/L							
1,2-Dichlorobenzene	ND	5.0	µg/L							
3,3-Dichlorobenzidine	ND	10	µg/L							V-34
2,4-Dichlorophenol	ND	10	µg/L							
Diethylphthalate	ND	10	µg/L							
2,4-Dimethylphenol	ND	10	µg/L							
Dimethylphthalate	ND	10	µg/L							V-20
4,6-Dinitro-2-methylphenol	ND	10	µg/L							
2,4-Dinitrophenol	ND	10	µg/L							V-04
2,4-Dinitrotoluene	ND	10	µg/L							
2,6-Dinitrotoluene	ND	10	µg/L							
Di-n-octylphthalate	ND	10	µg/L							V-20
1,2-Diphenylhydrazine (as Azobenzene)	ND	10	µg/L							
Bis(2-Ethylhexyl)phthalate	ND	10	µg/L							V-20
Fluoranthene	ND	5.0	µg/L							
Fluorene	ND	5.0	µg/L							
Hexachlorobenzene	ND	10	µg/L							
Hexachlorobutadiene	ND	10	µg/L							
Hexachlorocyclopentadiene	ND	10	µg/L							V-19
Hexachloroethane	ND	10	µg/L							
Isophorone	ND	10	µg/L							
Naphthalene	ND	5.0	µg/L							
Nitrobenzene	ND	10	µg/L							
2-Nitrophenol	ND	10	µg/L							
4-Nitrophenol	ND	10	µg/L							
N-Nitrosodimethylamine	ND	10	µg/L							
N-Nitrosodiphenylamine	ND	10	µg/L							
N-Nitrosodi-n-propylamine	ND	10	µg/L							
Pentachlorophenol	ND	10	µg/L							
2-Methylnaphthalene	ND	5.0	µg/L							
Phenanthrene	ND	5.0	µg/L							
2-Methylphenol	ND	10	µg/L							
Phenol	ND	10	µg/L							
3/4-Methylphenol	ND	10	µg/L							
Pyrene	ND	5.0	µg/L							
1,2,4-Trichlorobenzene	ND	5.0	µg/L							
2,4,6-Trichlorophenol	ND	10	µg/L							

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QUALITY CONTROL
Semivolatile Organic Compounds by - GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B196705 - SW-846 3510C
Blank (B196705-BLK1)

Prepared & Analyzed: 02/13/18

Surrogate: 2-Fluorophenol	110		µg/L	200		54.9	15-110			
Surrogate: Phenol-d6	82.6		µg/L	200		41.3	15-110			
Surrogate: Nitrobenzene-d5	72.6		µg/L	100		72.6	30-130			
Surrogate: 2-Fluorobiphenyl	81.8		µg/L	100		81.8	30-130			
Surrogate: 2,4,6-Tribromophenol	167		µg/L	200		83.3	15-110			
Surrogate: p-Terphenyl-d14	97.5		µg/L	100		97.5	30-130			

LCS (B196705-BS1)

Prepared & Analyzed: 02/13/18

Acenaphthene	39.5	5.0	µg/L	50.0		79.0	47-145			
Acenaphthylene	36.9	5.0	µg/L	50.0		73.8	33-145			
Anthracene	40.6	5.0	µg/L	50.0		81.1	27-133			
Benztidine	34.2	20	µg/L	50.0		68.3	40-140			V-05
Benzo(g,h,i)perylene	42.2	5.0	µg/L	50.0		84.4	1-219			V-20
4-Bromophenylphenylether	40.9	10	µg/L	50.0		81.8	53-127			
Butylbenzylphthalate	47.2	10	µg/L	50.0		94.4	1-152			
4-Chloro-3-methylphenol	43.8	10	µg/L	50.0		87.6	22-147			
Bis(2-chloroethyl)ether	38.6	10	µg/L	50.0		77.1	12-158			
Bis(2-chloroisopropyl)ether	42.2	10	µg/L	50.0		84.5	36-166			
2-Chloronaphthalene	32.2	10	µg/L	50.0		64.4	60-118			
2-Chlorophenol	37.4	10	µg/L	50.0		74.8	23-134			
4-Chlorophenylphenylether	37.1	10	µg/L	50.0		74.2	25-158			
Di-n-butylphthalate	44.4	10	µg/L	50.0		88.7	1-118			V-20
1,3-Dichlorobenzene	34.9	5.0	µg/L	50.0		69.8	1-172			
1,4-Dichlorobenzene	35.2	5.0	µg/L	50.0		70.4	20-124			
1,2-Dichlorobenzene	35.6	5.0	µg/L	50.0		71.1	32-129			
3,3-Dichlorobenzidine	43.0	10	µg/L	50.0		86.0	1-262			V-34
2,4-Dichlorophenol	38.4	10	µg/L	50.0		76.8	39-135			
Diethylphthalate	41.8	10	µg/L	50.0		83.6	1-114			
2,4-Dimethylphenol	41.6	10	µg/L	50.0		83.2	32-119			
Dimethylphthalate	41.6	10	µg/L	50.0		83.3	1-112			V-20
4,6-Dinitro-2-methylphenol	36.2	10	µg/L	50.0		72.4	1-181			
2,4-Dinitrophenol	31.3	10	µg/L	50.0		62.6	1-191			V-04
2,4-Dinitrotoluene	40.4	10	µg/L	50.0		80.8	39-139			
2,6-Dinitrotoluene	40.3	10	µg/L	50.0		80.6	50-158			
Di-n-octylphthalate	49.7	10	µg/L	50.0		99.4	4-146			V-20
1,2-Diphenylhydrazine (as Azobenzene)	46.4	10	µg/L	50.0		92.8	40-140			
Bis(2-Ethylhexyl)phthalate	46.4	10	µg/L	50.0		92.8	8-158			V-20
Fluoranthene	38.6	5.0	µg/L	50.0		77.3	26-137			
Fluorene	38.3	5.0	µg/L	50.0		76.7	59-121			
Hexachlorobenzene	40.1	10	µg/L	50.0		80.3	1-152			
Hexachlorobutadiene	36.9	10	µg/L	50.0		73.8	24-116			
Hexachlorocyclopentadiene	29.5	10	µg/L	50.0		59.0	40-140			V-19
Hexachloroethane	39.8	10	µg/L	50.0		79.5	40-113			
Isophorone	45.3	10	µg/L	50.0		90.6	21-196			
Naphthalene	38.5	5.0	µg/L	50.0		76.9	21-133			
Nitrobenzene	42.0	10	µg/L	50.0		84.0	35-180			
2-Nitrophenol	38.9	10	µg/L	50.0		77.9	29-182			
4-Nitrophenol	26.6	10	µg/L	50.0		53.1	1-132			
N-Nitrosodimethylamine	29.5	10	µg/L	50.0		58.9	40-140			
N-Nitrosodiphenylamine	50.0	10	µg/L	50.0		99.9	40-140			
N-Nitrosodi-n-propylamine	42.4	10	µg/L	50.0		84.9	1-230			
Pentachlorophenol	33.2	10	µg/L	50.0		66.3	14-176			

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QUALITY CONTROL
Semivolatile Organic Compounds by - GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B196705 - SW-846 3510C										
LCS (B196705-BS1)				Prepared & Analyzed: 02/13/18						
2-Methylnaphthalene	42.3	5.0	µg/L	50.0		84.6	40-140			
Phenanthrene	40.7	5.0	µg/L	50.0		81.4	54-120			
2-Methylphenol	33.5	10	µg/L	50.0		67.1	30-130			
Phenol	21.3	10	µg/L	50.0		42.6	5-112			
3/4-Methylphenol	35.3	10	µg/L	50.0		70.6	30-130			
Pyrene	40.4	5.0	µg/L	50.0		80.9	52-115			
1,2,4-Trichlorobenzene	35.4	5.0	µg/L	50.0		70.8	44-142			
2,4,6-Trichlorophenol	36.2	10	µg/L	50.0		72.4	37-144			
Surrogate: 2-Fluorophenol	116		µg/L	200		58.0	15-110			
Surrogate: Phenol-d6	76.7		µg/L	200		38.3	15-110			
Surrogate: Nitrobenzene-d5	92.1		µg/L	100		92.1	30-130			
Surrogate: 2-Fluorobiphenyl	82.2		µg/L	100		82.2	30-130			
Surrogate: 2,4,6-Tribromophenol	165		µg/L	200		82.6	15-110			
Surrogate: p-Terphenyl-d14	88.6		µg/L	100		88.6	30-130			
LCS Dup (B196705-BSD1)				Prepared & Analyzed: 02/13/18						
Acenaphthene	38.9	5.0	µg/L	50.0		77.7	47-145	1.58		
Acenaphthylene	37.4	5.0	µg/L	50.0		74.7	33-145	1.18		
Anthracene	39.8	5.0	µg/L	50.0		79.6	27-133	1.92		
Benzidine	53.3	20	µg/L	50.0		107	40-140	43.7		V-05
Benzo(g,h,i)perylene	44.9	5.0	µg/L	50.0		89.7	1-219	6.16		V-20
4-Bromophenylphenylether	42.1	10	µg/L	50.0		84.2	53-127	2.87		
Butylbenzylphthalate	48.9	10	µg/L	50.0		97.8	1-152	3.58		
4-Chloro-3-methylphenol	40.3	10	µg/L	50.0		80.5	22-147	8.45		
Bis(2-chloroethyl)ether	38.0	10	µg/L	50.0		76.1	12-158	1.38		
Bis(2-chloroisopropyl)ether	37.6	10	µg/L	50.0		75.3	36-166	11.5		
2-Chloronaphthalene	45.2	10	µg/L	50.0		90.3	60-118	33.6		
2-Chlorophenol	38.5	10	µg/L	50.0		77.0	23-134	2.90		
4-Chlorophenylphenylether	36.7	10	µg/L	50.0		73.5	25-158	0.975		
Di-n-butylphthalate	46.3	10	µg/L	50.0		92.6	1-118	4.26		V-20
1,3-Dichlorobenzene	37.6	5.0	µg/L	50.0		75.2	1-172	7.51		
1,4-Dichlorobenzene	36.2	5.0	µg/L	50.0		72.3	20-124	2.78		
1,2-Dichlorobenzene	32.9	5.0	µg/L	50.0		65.8	32-129	7.74		
3,3-Dichlorobenzidine	43.2	10	µg/L	50.0		86.4	1-262	0.487		V-34
2,4-Dichlorophenol	32.2	10	µg/L	50.0		64.4	39-135	17.7		
Diethylphthalate	41.1	10	µg/L	50.0		82.2	1-114	1.74		
2,4-Dimethylphenol	33.5	10	µg/L	50.0		67.0	32-119	21.6		
Dimethylphthalate	47.8	10	µg/L	50.0		95.6	1-112	13.8		V-20
4,6-Dinitro-2-methylphenol	33.3	10	µg/L	50.0		66.6	1-181	8.26		
2,4-Dinitrophenol	28.0	10	µg/L	50.0		56.1	1-191	11.0		V-04
2,4-Dinitrotoluene	37.6	10	µg/L	50.0		75.1	39-139	7.34		
2,6-Dinitrotoluene	39.9	10	µg/L	50.0		79.7	50-158	1.05		
Di-n-octylphthalate	51.6	10	µg/L	50.0		103	4-146	3.79		V-20
1,2-Diphenylhydrazine (as Azobenzene)	46.6	10	µg/L	50.0		93.1	40-140	0.366		
Bis(2-Ethylhexyl)phthalate	49.6	10	µg/L	50.0		99.3	8-158	6.75		V-20
Fluoranthene	38.8	5.0	µg/L	50.0		77.6	26-137	0.362		
Fluorene	36.3	5.0	µg/L	50.0		72.6	59-121	5.44		
Hexachlorobenzene	40.8	10	µg/L	50.0		81.7	1-152	1.70		
Hexachlorobutadiene	40.0	10	µg/L	50.0		80.0	24-116	8.06		
Hexachlorocyclopentadiene	36.6	10	µg/L	50.0		73.3	40-140	21.5		V-19
Hexachloroethane	36.3	10	µg/L	50.0		72.6	40-113	9.02		
Isophorone	39.2	10	µg/L	50.0		78.5	21-196	14.3		

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QUALITY CONTROL
Semivolatile Organic Compounds by - GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B196705 - SW-846 3510C										
LCS Dup (B196705-BSD1)				Prepared & Analyzed: 02/13/18						
Naphthalene	38.8	5.0	µg/L	50.0		77.6	21-133	0.829		
Nitrobenzene	38.4	10	µg/L	50.0		76.9	35-180	8.88		
2-Nitrophenol	32.4	10	µg/L	50.0		64.9	29-182	18.2		
4-Nitrophenol	22.9	10	µg/L	50.0		45.8	1-132	14.8		
N-Nitrosodimethylamine	19.2	10	µg/L	50.0		38.4	* 40-140	42.2		L-07
N-Nitrosodiphenylamine	50.0	10	µg/L	50.0		99.9	40-140	0.0400		
N-Nitrosodi-n-propylamine	38.6	10	µg/L	50.0		77.3	1-230	9.35		
Pentachlorophenol	32.8	10	µg/L	50.0		65.5	14-176	1.18		
2-Methylnaphthalene	40.0	5.0	µg/L	50.0		80.1	40-140	5.49	20	
Phenanthrene	39.2	5.0	µg/L	50.0		78.5	54-120	3.60		
2-Methylphenol	29.5	10	µg/L	50.0		59.1	30-130	12.7	20	
Phenol	18.1	10	µg/L	50.0		36.1	5-112	16.4		
3/4-Methylphenol	28.9	10	µg/L	50.0		57.9	30-130	19.8	20	
Pyrene	41.4	5.0	µg/L	50.0		82.7	52-115	2.27		
1,2,4-Trichlorobenzene	31.2	5.0	µg/L	50.0		62.4	44-142	12.6		
2,4,6-Trichlorophenol	44.0	10	µg/L	50.0		88.0	37-144	19.4		
Surrogate: 2-Fluorophenol	97.6		µg/L	200		48.8	15-110			
Surrogate: Phenol-d6	68.4		µg/L	200		34.2	15-110			
Surrogate: Nitrobenzene-d5	80.9		µg/L	100		80.9	30-130			
Surrogate: 2-Fluorobiphenyl	101		µg/L	100		101	30-130			
Surrogate: 2,4,6-Tribromophenol	156		µg/L	200		77.9	15-110			
Surrogate: p-Terphenyl-d14	95.9		µg/L	100		95.9	30-130			

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QUALITY CONTROL
Polychlorinated Biphenyls By GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B196690 - SW-846 3510C
Blank (B196690-BLK1)

Prepared: 02/12/18 Analyzed: 02/14/18

Aroclor-1016	ND	0.10	µg/L							
Aroclor-1016 [2C]	ND	0.10	µg/L							
Aroclor-1221	ND	0.10	µg/L							
Aroclor-1221 [2C]	ND	0.10	µg/L							
Aroclor-1232	ND	0.10	µg/L							
Aroclor-1232 [2C]	ND	0.10	µg/L							
Aroclor-1242	ND	0.10	µg/L							
Aroclor-1242 [2C]	ND	0.10	µg/L							
Aroclor-1248	ND	0.10	µg/L							
Aroclor-1248 [2C]	ND	0.10	µg/L							
Aroclor-1254	ND	0.10	µg/L							
Aroclor-1254 [2C]	ND	0.10	µg/L							
Aroclor-1260	ND	0.10	µg/L							
Aroclor-1260 [2C]	ND	0.10	µg/L							
Surrogate: Decachlorobiphenyl	1.42		µg/L	2.00		71.2	30-150			
Surrogate: Decachlorobiphenyl [2C]	1.81		µg/L	2.00		90.7	30-150			
Surrogate: Tetrachloro-m-xylene	1.51		µg/L	2.00		75.4	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	1.66		µg/L	2.00		82.9	30-150			

LCS (B196690-BS1)

Prepared: 02/12/18 Analyzed: 02/13/18

Aroclor-1016	0.42	0.20	µg/L	0.500		83.5	50-114			
Aroclor-1016 [2C]	0.44	0.20	µg/L	0.500		87.8	50-114			
Aroclor-1260	0.39	0.20	µg/L	0.500		77.9	8-127			
Aroclor-1260 [2C]	0.38	0.20	µg/L	0.500		76.7	8-127			
Surrogate: Decachlorobiphenyl	1.30		µg/L	2.00		65.2	30-150			
Surrogate: Decachlorobiphenyl [2C]	1.63		µg/L	2.00		81.4	30-150			
Surrogate: Tetrachloro-m-xylene	1.37		µg/L	2.00		68.5	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	1.49		µg/L	2.00		74.7	30-150			

LCS Dup (B196690-BSD1)

Prepared: 02/12/18 Analyzed: 02/13/18

Aroclor-1016	0.48	0.20	µg/L	0.500		96.9	50-114	14.8		
Aroclor-1016 [2C]	0.49	0.20	µg/L	0.500		98.9	50-114	11.9		
Aroclor-1260	0.45	0.20	µg/L	0.500		90.3	8-127	14.7		
Aroclor-1260 [2C]	0.44	0.20	µg/L	0.500		87.4	8-127	13.0		
Surrogate: Decachlorobiphenyl	1.50		µg/L	2.00		75.1	30-150			
Surrogate: Decachlorobiphenyl [2C]	1.89		µg/L	2.00		94.4	30-150			
Surrogate: Tetrachloro-m-xylene	1.60		µg/L	2.00		80.2	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	1.75		µg/L	2.00		87.5	30-150			

Batch B196707 - SW-846 3546
Blank (B196707-BLK1)

Prepared & Analyzed: 02/13/18

Aroclor-1016	ND	0.020	mg/Kg wet							
Aroclor-1016 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1221	ND	0.020	mg/Kg wet							
Aroclor-1221 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1232	ND	0.020	mg/Kg wet							
Aroclor-1232 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1242	ND	0.020	mg/Kg wet							
Aroclor-1242 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1248	ND	0.020	mg/Kg wet							
Aroclor-1248 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1254	ND	0.020	mg/Kg wet							

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QUALITY CONTROL

Polychlorinated Biphenyls By GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B196707 - SW-846 3546

Blank (B196707-BLK1)

Prepared & Analyzed: 02/13/18

Aroclor-1254 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1260	ND	0.020	mg/Kg wet							
Aroclor-1260 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1262	ND	0.020	mg/Kg wet							
Aroclor-1262 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1268	ND	0.020	mg/Kg wet							
Aroclor-1268 [2C]	ND	0.020	mg/Kg wet							
Surrogate: Decachlorobiphenyl	0.212		mg/Kg wet	0.200		106	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.201		mg/Kg wet	0.200		101	30-150			
Surrogate: Tetrachloro-m-xylene	0.187		mg/Kg wet	0.200		93.6	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.192		mg/Kg wet	0.200		96.1	30-150			

LCS (B196707-BS1)

Prepared & Analyzed: 02/13/18

Aroclor-1016	0.20	0.020	mg/Kg wet	0.200		98.5	40-140			
Aroclor-1016 [2C]	0.21	0.020	mg/Kg wet	0.200		103	40-140			
Aroclor-1260	0.18	0.020	mg/Kg wet	0.200		89.3	40-140			
Aroclor-1260 [2C]	0.18	0.020	mg/Kg wet	0.200		87.7	40-140			
Surrogate: Decachlorobiphenyl	0.222		mg/Kg wet	0.200		111	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.212		mg/Kg wet	0.200		106	30-150			
Surrogate: Tetrachloro-m-xylene	0.193		mg/Kg wet	0.200		96.7	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.197		mg/Kg wet	0.200		98.7	30-150			

LCS Dup (B196707-BSD1)

Prepared: 02/13/18 Analyzed: 02/14/18

Aroclor-1016	0.19	0.020	mg/Kg wet	0.200		96.2	40-140	2.38	30	
Aroclor-1016 [2C]	0.20	0.020	mg/Kg wet	0.200		99.8	40-140	3.57	30	
Aroclor-1260	0.18	0.020	mg/Kg wet	0.200		89.3	40-140	0.00784	30	
Aroclor-1260 [2C]	0.17	0.020	mg/Kg wet	0.200		84.2	40-140	4.16	30	
Surrogate: Decachlorobiphenyl	0.215		mg/Kg wet	0.200		108	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.204		mg/Kg wet	0.200		102	30-150			
Surrogate: Tetrachloro-m-xylene	0.184		mg/Kg wet	0.200		92.0	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.188		mg/Kg wet	0.200		93.9	30-150			

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QUALITY CONTROL
Petroleum Hydrocarbons Analyses - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B196706 - SW-846 3546										
Blank (B196706-BLK1)					Prepared & Analyzed: 02/13/18					
TPH (C9-C36)	ND	8.3	mg/Kg wet							
Surrogate: o-Terphenyl	2.62		mg/Kg wet	3.33		78.6	40-140			
LCS (B196706-BS1)					Prepared & Analyzed: 02/13/18					
TPH (C9-C36)	24.1	8.3	mg/Kg wet	33.3		72.2	40-140			
Surrogate: o-Terphenyl	2.65		mg/Kg wet	3.33		79.6	40-140			
LCS Dup (B196706-BSD1)					Prepared & Analyzed: 02/13/18					
TPH (C9-C36)	24.4	8.3	mg/Kg wet	33.3		73.3	40-140	1.44	30	
Surrogate: o-Terphenyl	2.67		mg/Kg wet	3.33		80.1	40-140			

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QUALITY CONTROL
Petroleum Hydrocarbons Analyses - EPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B196613 - SW-846 3510C
Blank (B196613-BLK1)

Prepared: 02/12/18 Analyzed: 02/13/18

C9-C18 Aliphatics	ND	100	µg/L							
C19-C36 Aliphatics	ND	100	µg/L							
Unadjusted C11-C22 Aromatics	ND	100	µg/L							
C11-C22 Aromatics	ND	100	µg/L							
Acenaphthene	ND	2.0	µg/L							
Acenaphthylene	ND	2.0	µg/L							
Anthracene	ND	2.0	µg/L							
Benzo(a)anthracene	ND	2.0	µg/L							
Benzo(a)pyrene	ND	2.0	µg/L							
Benzo(b)fluoranthene	ND	2.0	µg/L							
Benzo(g,h,i)perylene	ND	2.0	µg/L							
Benzo(k)fluoranthene	ND	2.0	µg/L							
Chrysene	ND	2.0	µg/L							
Dibenz(a,h)anthracene	ND	2.0	µg/L							
Fluoranthene	ND	2.0	µg/L							
Fluorene	ND	2.0	µg/L							
Indeno(1,2,3-cd)pyrene	ND	2.0	µg/L							
2-Methylnaphthalene	ND	2.0	µg/L							
Naphthalene	ND	2.0	µg/L							
Phenanthrene	ND	2.0	µg/L							
Pyrene	ND	2.0	µg/L							
n-Decane	ND	2.0	µg/L							
n-Docosane	ND	2.0	µg/L							
n-Dodecane	ND	2.0	µg/L							
n-Eicosane	ND	2.0	µg/L							
n-Hexacosane	ND	2.0	µg/L							
n-Hexadecane	ND	2.0	µg/L							
n-Hexatriacontane	ND	2.0	µg/L							
n-Nonadecane	ND	2.0	µg/L							
n-Nonane	ND	2.0	µg/L							
n-Octacosane	ND	2.0	µg/L							
n-Octadecane	ND	2.0	µg/L							
n-Tetracosane	ND	2.0	µg/L							
n-Tetradecane	ND	2.0	µg/L							
n-Triacontane	ND	2.0	µg/L							
Naphthalene-aliphatic fraction	ND	2.0	µg/L							
2-Methylnaphthalene-aliphatic fraction	ND	2.0	µg/L							
Surrogate: Chlorooctadecane (COD)	77.8		µg/L	99.8		77.9	40-140			
Surrogate: o-Terphenyl (OTP)	73.9		µg/L	100		73.9	40-140			
Surrogate: 2-Bromonaphthalene	91.5		µg/L	100		91.2	40-140			
Surrogate: 2-Fluorobiphenyl	86.1		µg/L	105		82.1	40-140			

LCS (B196613-BS1)

Prepared: 02/12/18 Analyzed: 02/13/18

C9-C18 Aliphatics	477	100	µg/L	600		79.5	0-200			
C19-C36 Aliphatics	761	100	µg/L	800		95.1	0-200			
Acenaphthene	72.5	2.0	µg/L	100		72.5	40-140			
Acenaphthylene	72.4	2.0	µg/L	100		72.4	40-140			
Anthracene	80.5	2.0	µg/L	100		80.5	40-140			
Benzo(a)anthracene	81.8	2.0	µg/L	100		81.8	40-140			
Benzo(a)pyrene	75.2	2.0	µg/L	100		75.2	40-140			
Benzo(b)fluoranthene	81.6	2.0	µg/L	100		81.6	40-140			
Benzo(g,h,i)perylene	72.0	2.0	µg/L	100		72.0	40-140			

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QUALITY CONTROL
Petroleum Hydrocarbons Analyses - EPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B196613 - SW-846 3510C
LCS (B196613-BS1)

Prepared: 02/12/18 Analyzed: 02/13/18

Benzo(k)fluoranthene	78.8	2.0	µg/L	100		78.8	40-140			
Chrysene	80.9	2.0	µg/L	100		80.9	40-140			
Dibenz(a,h)anthracene	76.4	2.0	µg/L	100		76.4	40-140			
Fluoranthene	81.8	2.0	µg/L	100		81.8	40-140			
Fluorene	76.7	2.0	µg/L	100		76.7	40-140			
Indeno(1,2,3-cd)pyrene	75.9	2.0	µg/L	100		75.9	40-140			
2-Methylnaphthalene	76.0	2.0	µg/L	100		76.0	40-140			
Naphthalene	68.2	2.0	µg/L	100		68.2	40-140			
Phenanthrene	81.7	2.0	µg/L	100		81.7	40-140			
Pyrene	82.9	2.0	µg/L	100		82.9	40-140			
n-Decane	58.4	2.0	µg/L	100		58.4	40-140			
n-Docosane	93.9	2.0	µg/L	100		93.9	40-140			
n-Dodecane	65.6	2.0	µg/L	100		65.6	40-140			
n-Eicosane	92.4	2.0	µg/L	100		92.4	40-140			
n-Hexacosane	92.7	2.0	µg/L	100		92.7	40-140			
n-Hexadecane	83.3	2.0	µg/L	100		83.3	40-140			
n-Hexatriacontane	78.2	2.0	µg/L	100		78.2	40-140			
n-Nonadecane	89.4	2.0	µg/L	100		89.4	40-140			
n-Nonane	47.5	2.0	µg/L	100		47.5	30-140			
n-Octacosane	88.3	2.0	µg/L	100		88.3	40-140			
n-Octadecane	91.1	2.0	µg/L	100		91.1	40-140			
n-Tetracosane	93.5	2.0	µg/L	100		93.5	40-140			
n-Tetradecane	74.6	2.0	µg/L	100		74.6	40-140			
n-Triacontane	84.3	2.0	µg/L	100		84.3	40-140			
Naphthalene-aliphatic fraction	ND	2.0	µg/L	100			0-5			
2-Methylnaphthalene-aliphatic fraction	ND	2.0	µg/L	100			0-5			
Surrogate: Chlorooctadecane (COD)	92.1		µg/L	99.8		92.3	40-140			
Surrogate: o-Terphenyl (OTP)	81.3		µg/L	100		81.3	40-140			
Surrogate: 2-Bromonaphthalene	92.9		µg/L	100		92.6	40-140			
Surrogate: 2-Fluorobiphenyl	90.7		µg/L	105		86.5	40-140			

LCS Dup (B196613-BS1)

Prepared: 02/12/18 Analyzed: 02/13/18

C9-C18 Aliphatics	477	100	µg/L	600		79.5	0-200	0.0654		
C19-C36 Aliphatics	761	100	µg/L	800		95.1	0-200	0.00210		
Acenaphthene	77.9	2.0	µg/L	100		77.9	40-140	7.09	25	
Acenaphthylene	77.4	2.0	µg/L	100		77.4	40-140	6.68	25	
Anthracene	85.2	2.0	µg/L	100		85.2	40-140	5.68	25	
Benzo(a)anthracene	87.4	2.0	µg/L	100		87.4	40-140	6.67	25	
Benzo(a)pyrene	81.2	2.0	µg/L	100		81.2	40-140	7.56	25	
Benzo(b)fluoranthene	86.5	2.0	µg/L	100		86.5	40-140	5.88	25	
Benzo(g,h,i)perylene	82.5	2.0	µg/L	100		82.5	40-140	13.6	25	
Benzo(k)fluoranthene	85.6	2.0	µg/L	100		85.6	40-140	8.25	25	
Chrysene	88.1	2.0	µg/L	100		88.1	40-140	8.50	25	
Dibenz(a,h)anthracene	86.6	2.0	µg/L	100		86.6	40-140	12.5	25	
Fluoranthene	86.1	2.0	µg/L	100		86.1	40-140	5.06	25	
Fluorene	81.8	2.0	µg/L	100		81.8	40-140	6.46	25	
Indeno(1,2,3-cd)pyrene	81.4	2.0	µg/L	100		81.4	40-140	6.92	25	
2-Methylnaphthalene	82.0	2.0	µg/L	100		82.0	40-140	7.69	25	
Naphthalene	71.8	2.0	µg/L	100		71.8	40-140	5.17	25	
Phenanthrene	86.2	2.0	µg/L	100		86.2	40-140	5.46	25	
Pyrene	86.7	2.0	µg/L	100		86.7	40-140	4.46	25	
n-Decane	57.9	2.0	µg/L	100		57.9	40-140	0.726	25	

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QUALITY CONTROL
Petroleum Hydrocarbons Analyses - EPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B196613 - SW-846 3510C
LCS Dup (B196613-BSD1)

Prepared: 02/12/18 Analyzed: 02/13/18

n-Docosane	94.3	2.0	µg/L	100		94.3	40-140	0.406	25	
n-Dodecane	66.1	2.0	µg/L	100		66.1	40-140	0.772	25	
n-Eicosane	92.9	2.0	µg/L	100		92.9	40-140	0.516	25	
n-Hexacosane	93.3	2.0	µg/L	100		93.3	40-140	0.662	25	
n-Hexadecane	83.7	2.0	µg/L	100		83.7	40-140	0.431	25	
n-Hexatriacontane	78.8	2.0	µg/L	100		78.8	40-140	0.795	25	
n-Nonadecane	89.7	2.0	µg/L	100		89.7	40-140	0.295	25	
n-Nonane	47.4	2.0	µg/L	100		47.4	30-140	0.379	25	
n-Octacosane	88.7	2.0	µg/L	100		88.7	40-140	0.515	25	
n-Octadecane	91.2	2.0	µg/L	100		91.2	40-140	0.114	25	
n-Tetracosane	94.0	2.0	µg/L	100		94.0	40-140	0.542	25	
n-Tetradecane	76.4	2.0	µg/L	100		76.4	40-140	2.46	25	
n-Triacontane	85.0	2.0	µg/L	100		85.0	40-140	0.822	25	
Naphthalene-aliphatic fraction	ND	2.0	µg/L	100			0-5			
2-Methylnaphthalene-aliphatic fraction	ND	2.0	µg/L	100			0-5			
Surrogate: Chlorooctadecane (COD)	94.5		µg/L	99.8		94.7	40-140			
Surrogate: o-Terphenyl (OTP)	86.7		µg/L	100		86.7	40-140			
Surrogate: 2-Bromonaphthalene	92.6		µg/L	100		92.2	40-140			
Surrogate: 2-Fluorobiphenyl	92.3		µg/L	105		88.0	40-140			

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QUALITY CONTROL
Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B196711 - SW-846 3051										
Blank (B196711-BLK1) Prepared & Analyzed: 02/13/18										
Arsenic	ND	1.7	mg/Kg wet							
Barium	ND	1.7	mg/Kg wet							
Cadmium	ND	0.17	mg/Kg wet							
Chromium	ND	0.33	mg/Kg wet							
Lead	ND	0.50	mg/Kg wet							
Selenium	ND	3.3	mg/Kg wet							
Silver	ND	0.33	mg/Kg wet							
LCS (B196711-BS1) Prepared & Analyzed: 02/13/18										
Arsenic	130	5.0	mg/Kg wet	147		88.2	83-117			
Barium	286	5.0	mg/Kg wet	314		91.0	82.2-117.8			
Cadmium	173	0.50	mg/Kg wet	193		89.5	82.4-117.6			
Chromium	78.5	1.0	mg/Kg wet	82.6		95.0	81.8-118.2			
Lead	87.8	1.5	mg/Kg wet	92.3		95.1	82.8-117			
Selenium	161	10	mg/Kg wet	187		86.0	79.1-121.4			
Silver	38.5	1.0	mg/Kg wet	40.7		94.6	79.6-120.4			
LCS Dup (B196711-BSD1) Prepared & Analyzed: 02/13/18										
Arsenic	124	4.7	mg/Kg wet	147		84.5	83-117	4.23	30	
Barium	268	4.7	mg/Kg wet	314		85.4	82.2-117.8	6.30	30	
Cadmium	165	0.47	mg/Kg wet	193		85.4	82.4-117.6	4.66	30	
Chromium	74.1	0.95	mg/Kg wet	82.6		89.7	81.8-118.2	5.70	30	
Lead	81.3	1.4	mg/Kg wet	92.3		88.1	82.8-117	7.64	30	
Selenium	153	9.5	mg/Kg wet	187		81.7	79.1-121.4	5.07	30	
Silver	36.4	0.95	mg/Kg wet	40.7		89.5	79.6-120.4	5.54	30	
Duplicate (B196711-DUP1) Source: 18B0416-01 Prepared & Analyzed: 02/13/18										
Arsenic	3.01	1.9	mg/Kg dry		2.92			3.12	35	
Barium	37.2	1.9	mg/Kg dry		30.7			19.2	35	
Cadmium	ND	0.19	mg/Kg dry		ND			NC	35	
Chromium	18.8	0.38	mg/Kg dry		13.6			32.0	35	
Lead	54.4	0.57	mg/Kg dry		37.2			37.5 *	35	R-02
Selenium	ND	3.8	mg/Kg dry		ND			NC	35	
Silver	0.654	0.38	mg/Kg dry		0.490			28.6	35	
MRL Check (B196711-MRL1) Prepared & Analyzed: 02/13/18										
Lead	0.483	0.50	mg/Kg wet	0.497		97.3	80-120			
Matrix Spike (B196711-MS1) Source: 18B0416-01 Prepared & Analyzed: 02/13/18										
Arsenic	19.1	1.9	mg/Kg dry	19.0	2.92	85.5	75-125			
Barium	49.8	1.9	mg/Kg dry	19.0	30.7	101	75-125			
Cadmium	17.1	0.19	mg/Kg dry	19.0	0.151	89.2	75-125			
Chromium	29.7	0.38	mg/Kg dry	19.0	13.6	84.5	75-125			
Lead	78.0	0.57	mg/Kg dry	19.0	37.2	215 *	75-125			MS-11
Selenium	15.7	3.8	mg/Kg dry	19.0	ND	82.8	75-125			
Silver	17.9	0.38	mg/Kg dry	19.0	0.490	92.0	75-125			

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QUALITY CONTROL
Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B196713 - SW-846 7471										
Blank (B196713-BLK1)				Prepared & Analyzed: 02/13/18						
Mercury	ND	0.025	mg/Kg wet							
LCS (B196713-BS1)				Prepared & Analyzed: 02/13/18						
Mercury	9.83	1.9	mg/Kg wet	9.36		105	73.7-126.3			
LCS Dup (B196713-BSD1)				Prepared & Analyzed: 02/13/18						
Mercury	9.08	1.9	mg/Kg wet	9.36		97.0	73.7-126.3	7.94	30	
Duplicate (B196713-DUP1)				Source: 18B0416-01			Prepared & Analyzed: 02/13/18			
Mercury	0.147	0.029	mg/Kg dry		0.116			23.3	35	
Matrix Spike (B196713-MS1)				Source: 18B0416-01			Prepared & Analyzed: 02/13/18			
Mercury	0.287	0.029	mg/Kg dry	0.191	0.116	89.5	75-125			
Batch B196735 - EPA 200.7										
Blank (B196735-BLK1)				Prepared: 02/13/18 Analyzed: 02/14/18						
Iron	ND	0.050	mg/L							
LCS (B196735-BS1)				Prepared: 02/13/18 Analyzed: 02/14/18						
Iron	3.94	0.050	mg/L	4.00		98.5	85-115			
LCS Dup (B196735-BSD1)				Prepared: 02/13/18 Analyzed: 02/14/18						
Iron	3.88	0.050	mg/L	4.00		97.0	85-115	1.47	20	
Batch B196737 - EPA 200.8										
Blank (B196737-BLK1)				Prepared: 02/13/18 Analyzed: 02/14/18						
Antimony	ND	1.0	µg/L							
Arsenic	ND	1.0	µg/L							
Cadmium	ND	0.20	µg/L							
Chromium	ND	10	µg/L							
Copper	ND	1.0	µg/L							
Lead	ND	0.50	µg/L							
Nickel	ND	5.0	µg/L							
Selenium	ND	5.0	µg/L							
Silver	ND	0.20	µg/L							
Zinc	ND	20	µg/L							
LCS (B196737-BS1)				Prepared: 02/13/18 Analyzed: 02/14/18						
Antimony	498	10	µg/L	500		99.5	85-115			
Arsenic	502	10	µg/L	500		100	85-115			
Cadmium	510	2.0	µg/L	500		102	85-115			
Chromium	507	100	µg/L	500		101	85-115			
Copper	989	10	µg/L	1000		98.9	85-115			
Lead	503	5.0	µg/L	500		101	85-115			
Nickel	499	50	µg/L	500		99.9	85-115			
Selenium	488	50	µg/L	500		97.7	85-115			
Silver	496	2.0	µg/L	500		99.3	85-115			
Zinc	1010	200	µg/L	1000		101	85-115			

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QUALITY CONTROL
Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B196737 - EPA 200.8
LCS Dup (B196737-BSD1)

Prepared: 02/13/18 Analyzed: 02/14/18

Antimony	511	10	µg/L	500		102	85-115	2.72	20	
Arsenic	507	10	µg/L	500		101	85-115	1.06	20	
Cadmium	523	2.0	µg/L	500		105	85-115	2.56	20	
Chromium	521	100	µg/L	500		104	85-115	2.68	20	
Copper	1020	10	µg/L	1000		102	85-115	2.78	20	
Lead	513	5.0	µg/L	500		103	85-115	1.92	20	
Nickel	513	50	µg/L	500		103	85-115	2.59	20	
Selenium	502	50	µg/L	500		100	85-115	2.81	20	
Silver	511	2.0	µg/L	500		102	85-115	2.95	20	
Zinc	1030	200	µg/L	1000		103	85-115	2.03	20	

Batch B196740 - EPA 245.1
Blank (B196740-BLK1)

Prepared & Analyzed: 02/13/18

Mercury	ND	0.00010	mg/L							
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LCS (B196740-BS1)

Prepared & Analyzed: 02/13/18

Mercury	0.00188	0.00010	mg/L	0.00200		93.8	85-115			
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LCS Dup (B196740-BSD1)

Prepared & Analyzed: 02/13/18

Mercury	0.00193	0.00010	mg/L	0.00200		96.7	85-115	2.96	20	
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Batch B196818 - SW-846 3051
Blank (B196818-BLK1)

Prepared & Analyzed: 02/14/18

Lead	ND	0.50	mg/Kg wet							
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LCS (B196818-BS1)

Prepared & Analyzed: 02/14/18

Lead	92.1	1.5	mg/Kg wet	92.3		99.7	82.8-117			
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LCS Dup (B196818-BSD1)

Prepared & Analyzed: 02/14/18

Lead	103	1.5	mg/Kg wet	92.3		111	82.8-117	10.9	30	
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MRL Check (B196818-MRL1)

Prepared & Analyzed: 02/14/18

Lead	0.604	0.50	mg/Kg wet	0.495		122 *	80-120			M-10
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QUALITY CONTROL
Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B196702 - SM21-22 4500 CL G										
Blank (B196702-BLK1)				Prepared & Analyzed: 02/12/18						
Chlorine, Residual	ND	0.020	mg/L							
LCS (B196702-BS1)				Prepared & Analyzed: 02/12/18						
Chlorine, Residual	1.2	0.020	mg/L	1.30		94.5	82.5-130			
LCS Dup (B196702-BSD1)				Prepared & Analyzed: 02/12/18						
Chlorine, Residual	1.2	0.020	mg/L	1.30		95.7	82.5-130	1.27	6.2	
Duplicate (B196702-DUP1)				Source: 18B0416-02		Prepared & Analyzed: 02/12/18				
Chlorine, Residual	ND	0.020	mg/L		ND			NC	44.8	
Matrix Spike (B196702-MS1)				Source: 18B0416-02		Prepared & Analyzed: 02/12/18				
Chlorine, Residual	0.95	0.020	mg/L	1.00	ND	95.2	10-182			
Batch B196719 - SM21-22 2540D										
Blank (B196719-BLK1)				Prepared & Analyzed: 02/13/18						
Total Suspended Solids	ND	2.5	mg/L							
LCS (B196719-BS1)				Prepared & Analyzed: 02/13/18						
Total Suspended Solids	164	20	mg/L	200		82.0	66.7-117			
Duplicate (B196719-DUP1)				Source: 18B0416-02		Prepared & Analyzed: 02/13/18				
Total Suspended Solids	7.0	5.0	mg/L		7.0			0.00	5	
Batch B196723 - % Solids										
Duplicate (B196723-DUP1)				Source: 18B0416-01		Prepared & Analyzed: 02/13/18				
% Solids	87.3		% Wt		87.5			0.257	20	
Batch B196732 - SM21-22 3500 Cr B										
Blank (B196732-BLK1)				Prepared & Analyzed: 02/12/18						
Hexavalent Chromium	ND	0.0040	mg/L							
LCS (B196732-BS1)				Prepared & Analyzed: 02/12/18						
Hexavalent Chromium	0.097	0.0040	mg/L	0.100		97.0	86.6-115			
LCS Dup (B196732-BSD1)				Prepared & Analyzed: 02/12/18						
Hexavalent Chromium	0.099	0.0040	mg/L	0.100		99.4	86.6-115	2.43	6.61	

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QUALITY CONTROL
Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B196732 - SM21-22 3500 Cr B										
Duplicate (B196732-DUP1)	Source: 18B0416-02			Prepared & Analyzed: 02/12/18						
Hexavalent Chromium	ND	0.0040	mg/L		ND			NC	20	R-01
Matrix Spike (B196732-MS1)	Source: 18B0416-02			Prepared & Analyzed: 02/12/18						
Hexavalent Chromium	0.071	0.0040	mg/L	0.100	0.0039	66.9	23.5-142			
Matrix Spike Dup (B196732-MSD1)	Source: 18B0416-02			Prepared & Analyzed: 02/12/18						
Hexavalent Chromium	0.072	0.0040	mg/L	0.100	0.0039	68.1	23.5-142	1.67	7.59	
Batch B196743 - SM21-22 2510B Modified										
Blank (B196743-BLK1)				Prepared & Analyzed: 02/13/18						
Specific conductance	ND	2.0	µmhos/cm							
LCS (B196743-BS1)				Prepared & Analyzed: 02/13/18						
Specific conductance	190		µmhos/cm	192		100	89.2-110			
Batch B196744 - SW-846 9014										
Blank (B196744-BLK1)				Prepared: 02/13/18 Analyzed: 02/14/18						
Reactive Cyanide	ND	0.40	mg/Kg							
LCS (B196744-BS1)				Prepared: 02/13/18 Analyzed: 02/14/18						
Reactive Cyanide	9.4	0.40	mg/Kg	10.0		94.4	85.9-110			
Batch B196747 - EPA 1664B										
Blank (B196747-BLK1)				Prepared & Analyzed: 02/13/18						
Silica Gel Treated HEM (SGT-HEM)	ND	1.4	mg/L							
LCS (B196747-BS1)				Prepared & Analyzed: 02/13/18						
Silica Gel Treated HEM (SGT-HEM)	9.9		mg/L	10.0		99.0	64-132			
Duplicate (B196747-DUP1)	Source: 18B0416-02			Prepared & Analyzed: 02/13/18						
Silica Gel Treated HEM (SGT-HEM)	ND	1.6	mg/L		ND			NC	18	
Matrix Spike (B196747-MS1)	Source: 18B0416-02			Prepared & Analyzed: 02/13/18						
Silica Gel Treated HEM (SGT-HEM)	110	14	mg/L	100	ND	106	64-132			
Batch B196748 - SW-846 9030A										
Blank (B196748-BLK1)				Prepared: 02/13/18 Analyzed: 02/14/18						
Reactive Sulfide	ND	2.0	mg/Kg							

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QUALITY CONTROL
Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B196748 - SW-846 9030A
LCS (B196748-BS1)

Prepared: 02/13/18 Analyzed: 02/14/18

Reactive Sulfide	16	2.0	mg/Kg	14.8		105	64.5-120			
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Batch B196802 - SW-846 9045C
LCS (B196802-BS1)

Prepared & Analyzed: 02/13/18

pH	6.00		pH Units	6.00		100	98.5-110			
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QUALITY CONTROL
Drinking Water Organics EPA 504.1 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
Batch B196751 - EPA 504 water									
Blank (B196751-BLK1)				Prepared & Analyzed: 02/13/18					
1,2-Dibromoethane (EDB)	ND	0.021	µg/L						
1,2-Dibromoethane (EDB) [2C]	ND	0.021	µg/L						
LCS (B196751-BS1)				Prepared & Analyzed: 02/13/18					
1,2-Dibromoethane (EDB)	0.174	0.021	µg/L	0.185		94.3	70-130		
1,2-Dibromoethane (EDB) [2C]	0.173	0.021	µg/L	0.185		93.7	70-130		
LCS Dup (B196751-BSD1)				Prepared & Analyzed: 02/13/18					
1,2-Dibromoethane (EDB)	0.174	0.021	µg/L	0.183		95.4	70-130	0.0661	
1,2-Dibromoethane (EDB) [2C]	0.181	0.021	µg/L	0.183		99.4	70-130	4.78	

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
B	Analyte is found in the associated blank as well as in the sample.
DL-15	Sample required a dilution due to low internal standard recovery of the lesser diluted digestion, reporting limit is elevated.
H-03	Sample received after recommended holding time was exceeded.
J	[Undefined]
Ja	Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated concentration (CLP J-Flag).
L-04	Laboratory fortified blank/laboratory control sample recovery and duplicate recovery are outside of control limits. Reported value for this compound is likely to be biased on the low side.
L-07	Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.
L-14	Compound classified by MA CAM as difficult with acceptable recoveries of 40-160%. Recovery does not meet 70-130% criteria but does meet difficult compound criteria.
M-10	The reporting limit verification for the AIHA lead program is outside of control limits for this element. Any reported result at or near the detection limit may be biased on the high side.
MS-11	Matrix spike recovery outside of control limits. Possibility of sample matrix effects that lead to a high bias for reported result or non-homogeneous sample aliquots cannot be eliminated.
O-32	A dilution was performed as part of the standard analytical procedure.
R-01	Duplicate RPD is outside of control limits. Reduced precision is anticipated for reported result.
R-02	Duplicate RPD is outside of control limits. Outlier can be attributed to sample non-homogeneity encountered during sample prep.
R-05	Laboratory fortified blank duplicate RPD is outside of control limits. Reduced precision is anticipated for any reported value for this compound.
V-04	Initial calibration did not meet method specifications. Compound was calibrated using a response factor where %RSD is outside of method specified criteria. Reported result is estimated.
V-05	Continuing calibration did not meet method specifications and was biased on the low side for this compound. Reported result is estimated.
V-06	Continuing calibration did not meet method specifications and was biased on the high side for this compound. Reported result is estimated.
V-16	Response factor is less than method specified minimum acceptable value. Reduced precision and accuracy may be associated with reported result.
V-19	Initial calibration did not meet method specifications. Compound was calibrated using linear regression with correlation coefficient <0.99. Reported result is estimated.
V-20	Continuing calibration did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.
V-34	Initial calibration verification (ICV) did not meet method specifications and was biased on the low side for this compound. Reported result is estimated.
Z-01	SM4500 test had a calibration point outside acceptable back calculated recovery. Reanalysis yielded similar non-conformance.

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>EPA 200.7 in Water</i>	
Iron	CT,MA,NH,NY,RI,NC,ME,VA
<i>EPA 200.8 in Water</i>	
Antimony	CT,MA,NH,NY,RI,NC,ME,VA
Arsenic	CT,MA,NH,NY,RI,NC,ME,VA
Cadmium	CT,MA,NH,NY,RI,NC,ME,VA
Chromium	CT,MA,NH,NY,RI,NC,ME,VA
Copper	CT,MA,NH,NY,RI,NC,ME,VA
Lead	CT,MA,NH,NY,RI,NC,ME,VA
Nickel	CT,MA,NH,NY,RI,NC,ME,VA
Selenium	CT,MA,NH,NY,RI,NC,ME,VA
Silver	CT,MA,NH,NY,RI,NC,ME,VA
Zinc	CT,MA,NH,NY,RI,NC,ME,VA
<i>EPA 245.1 in Water</i>	
Mercury	CT,MA,NH,RI,NY,NC,ME,VA
<i>EPA 300.0 in Water</i>	
Chloride	NC,NY,MA,VA,ME,NH,CT,RI
<i>EPA 608 in Water</i>	
Aroclor-1016	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1016 [2C]	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1221	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1221 [2C]	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1232	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1232 [2C]	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1242	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1242 [2C]	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1248	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1248 [2C]	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1254	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1254 [2C]	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1260	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1260 [2C]	CT,MA,NH,NY,RI,NC,ME,VA
<i>EPA 624 in Water</i>	
Acetone	NH,NY
Benzene	CT,MA,NH,NY,RI,NC,ME,VA
Bromodichloromethane	CT,MA,NH,NY,RI,NC,ME,VA
Bromoform	CT,MA,NH,NY,RI,NC,ME,VA
Bromomethane	CT,MA,NH,NY,RI,NC,ME,VA
Carbon Tetrachloride	CT,MA,NH,NY,RI,NC,ME,VA
Chlorobenzene	CT,MA,NH,NY,RI,NC,ME,VA
Chlorodibromomethane	CT,MA,NH,NY,RI,NC,ME,VA
Chloroethane	CT,MA,NH,NY,RI,NC,ME,VA
Chloroform	CT,MA,NH,NY,RI,NC,ME,VA
Chloromethane	CT,MA,NH,NY,RI,NC,ME,VA
1,2-Dichlorobenzene	CT,MA,NH,NY,RI,NC,ME,VA
1,3-Dichlorobenzene	CT,MA,NH,NY,RI,NC,ME,VA

CERTIFICATIONS
Certified Analyses included in this Report

Analyte	Certifications
<i>EPA 624 in Water</i>	
1,4-Dichlorobenzene	CT,MA,NH,NY,RI,NC,ME,VA
1,2-Dichloroethane	CT,MA,NH,NY,RI,NC,ME,VA
1,1-Dichloroethane	CT,MA,NH,NY,RI,NC,ME,VA
1,1-Dichloroethylene	CT,MA,NH,NY,RI,NC,ME,VA
trans-1,2-Dichloroethylene	CT,MA,NH,NY,RI,NC,ME,VA
1,2-Dichloropropane	CT,MA,NH,NY,RI,NC,ME,VA
cis-1,3-Dichloropropene	CT,MA,NH,NY,RI,NC,ME,VA
trans-1,3-Dichloropropene	CT,MA,NH,NY,RI,NC,ME,VA
Ethylbenzene	CT,MA,NH,NY,RI,NC,ME,VA
Methyl tert-Butyl Ether (MTBE)	NH,NY,NC
Methylene Chloride	CT,MA,NH,NY,RI,NC,ME,VA
Naphthalene	NC
1,1,2,2-Tetrachloroethane	CT,MA,NH,NY,RI,NC,ME,VA
Tetrachloroethylene	CT,MA,NH,NY,RI,NC,ME,VA
Toluene	CT,MA,NH,NY,RI,NC,ME,VA
1,2,4-Trichlorobenzene	NC
1,1,1-Trichloroethane	CT,MA,NH,NY,RI,NC,ME,VA
1,1,2-Trichloroethane	CT,MA,NH,NY,RI,NC,ME,VA
Trichloroethylene	CT,MA,NH,NY,RI,NC,ME,VA
Trichlorofluoromethane (Freon 11)	CT,MA,NH,NY,RI,NC,ME,VA
Vinyl Chloride	CT,MA,NH,NY,RI,NC,ME,VA
m+p Xylene	CT,MA,NH,NY,RI,NC,VA
o-Xylene	CT,MA,NH,NY,RI,NC,VA
<i>EPA 625 in Water</i>	
Acenaphthene	CT,MA,NH,NY,NC,RI,ME,VA
Acenaphthylene	CT,MA,NH,NY,NC,RI,ME,VA
Acetophenone	NY,NC
Anthracene	CT,MA,NH,NY,NC,RI,ME,VA
Aniline	NC
Benzidine	CT,MA,NH,NY,NC,RI,ME,VA
Benzo(a)anthracene	CT,MA,NH,NY,NC,RI,ME,VA
Benzo(a)pyrene	CT,MA,NH,NY,NC,RI,ME,VA
Benzo(b)fluoranthene	CT,MA,NH,NY,NC,RI,ME,VA
Benzo(g,h,i)perylene	CT,MA,NH,NY,NC,RI,ME,VA
Benzo(k)fluoranthene	CT,MA,NH,NY,NC,RI,ME,VA
4-Bromophenylphenylether	CT,MA,NH,NY,NC,RI,ME,VA
Butylbenzylphthalate	CT,MA,NH,NY,NC,RI,ME,VA
4-Chloro-3-methylphenol	CT,MA,NH,NY,NC,RI,VA
Bis(2-chloroethoxy)methane	CT,MA,NH,NY,NC,RI,ME,VA
Bis(2-chloroethyl)ether	CT,MA,NH,NY,NC,RI,ME,VA
Bis(2-chloroisopropyl)ether	CT,MA,NH,NY,NC,RI,ME,VA
2-Chloronaphthalene	CT,MA,NH,NY,NC,RI,ME,VA
2-Chlorophenol	CT,MA,NH,NY,NC,RI,ME,VA
4-Chlorophenylphenylether	CT,MA,NH,NY,NC,RI,ME,VA
Chrysene	CT,MA,NH,NY,NC,RI,ME,VA
4-Chloroaniline	NC

CERTIFICATIONS
Certified Analyses included in this Report

Analyte	Certifications
<i>EPA 625 in Water</i>	
Dibenz(a,h)anthracene	CT,MA,NH,NY,NC,RI,ME,VA
Di-n-butylphthalate	CT,MA,NH,NY,NC,RI,ME,VA
1,3-Dichlorobenzene	MA,NC
1,4-Dichlorobenzene	MA,NC
1,2-Dichlorobenzene	MA,NC
3,3-Dichlorobenzidine	CT,MA,NH,NY,NC,RI,ME,VA
2,4-Dichlorophenol	CT,MA,NH,NY,NC,RI,ME,VA
Dibenzofuran	NC
Diethylphthalate	CT,MA,NH,NY,NC,RI,ME,VA
2,4-Dimethylphenol	CT,MA,NH,NY,NC,RI,ME,VA
Dimethylphthalate	CT,MA,NH,NY,NC,RI,ME,VA
4,6-Dinitro-2-methylphenol	CT,MA,NH,NY,NC,RI,ME,VA
2,4-Dinitrophenol	CT,MA,NH,NY,NC,RI,ME,VA
2,4-Dinitrotoluene	CT,MA,NH,NY,NC,RI,ME,VA
2,6-Dinitrotoluene	CT,MA,NH,NY,NC,RI,ME,VA
Di-n-octylphthalate	CT,MA,NH,NY,NC,RI,ME,VA
1,2-Diphenylhydrazine (as Azobenzene)	NC
Bis(2-Ethylhexyl)phthalate	CT,MA,NH,NY,NC,RI,ME,VA
Fluoranthene	CT,MA,NH,NY,NC,RI,ME,VA
Fluorene	CT,MA,NH,NY,NC,RI,ME,VA
Hexachlorobenzene	CT,MA,NH,NY,NC,RI,ME,VA
Hexachlorobutadiene	CT,MA,NH,NY,NC,RI,ME,VA
Hexachlorocyclopentadiene	CT,MA,NH,NY,NC,RI,ME,VA
Hexachloroethane	CT,MA,NH,NY,NC,RI,ME,VA
Indeno(1,2,3-cd)pyrene	CT,MA,NH,NY,NC,RI,ME,VA
Isophorone	CT,MA,NH,NY,NC,RI,ME,VA
Naphthalene	CT,MA,NH,NY,NC,RI,ME,VA
Nitrobenzene	CT,MA,NH,NY,NC,RI,ME,VA
2-Nitrophenol	CT,MA,NH,NY,NC,RI,ME,VA
4-Nitrophenol	CT,MA,NH,NY,NC,RI,ME,VA
N-Nitrosodimethylamine	CT,MA,NH,NY,NC,RI,ME,VA
N-Nitrosodiphenylamine	CT,MA,NH,NY,NC,RI,ME,VA
N-Nitrosodi-n-propylamine	CT,MA,NH,NY,NC,RI,ME,VA
Pentachlorophenol	CT,MA,NH,NY,NC,RI,ME,VA
2-Methylnaphthalene	NC
Phenanthrene	CT,MA,NH,NY,NC,RI,ME,VA
2-Methylphenol	NY,NC
Phenol	CT,MA,NH,NY,NC,RI,ME,VA
3/4-Methylphenol	NY,NC
Pyrene	CT,MA,NH,NY,NC,RI,ME,VA
1,2,4-Trichlorobenzene	CT,MA,NH,NY,NC,RI,ME,VA
2,4,6-Trichlorophenol	CT,MA,NH,NY,NC,RI,ME,VA
2,4,5-Trichlorophenol	CT,MA,NH,NY,NC
2-Fluorophenol	NC
<i>MADEP-EPH-04-1.1 in Water</i>	
C9-C18 Aliphatics	CT,NC,ME,NH-P

CERTIFICATIONS
Certified Analyses included in this Report

Analyte	Certifications
<i>MADEP-EPH-04-1.1 in Water</i>	
C19-C36 Aliphatics	CT,NC,ME,NH-P
Unadjusted C11-C22 Aromatics	CT,NC,ME,NH-P
C11-C22 Aromatics	CT,NC,ME,NH-P
Acenaphthene	CT,NC,ME,NH-P
Acenaphthylene	CT,NC,ME,NH-P
Anthracene	CT,NC,ME,NH-P
Benzo(a)anthracene	CT,NC,ME,NH-P
Benzo(a)pyrene	CT,NC,ME,NH-P
Benzo(b)fluoranthene	CT,NC,ME,NH-P
Benzo(g,h,i)perylene	CT,NC,ME,NH-P
Benzo(k)fluoranthene	CT,NC,ME,NH-P
Chrysene	CT,NC,ME,NH-P
Dibenz(a,h)anthracene	CT,NC,ME,NH-P
Fluoranthene	CT,NC,ME,NH-P
Fluorene	CT,NC,ME
Indeno(1,2,3-cd)pyrene	CT,NC,ME,NH-P
2-Methylnaphthalene	CT,NC
Naphthalene	CT,NC,ME,NH-P
Phenanthrene	CT,NC,ME,NH-P
Pyrene	CT,NC,ME,NH-P
<i>SM19-22 4500 NH3 C in Water</i>	
Ammonia as N	NY,MA,CT,RI,VA,NC,ME
<i>SM21-22 2540D in Water</i>	
Total Suspended Solids	CT,MA,NH,NY,RI,NC,ME,VA
<i>SM21-22 3500 Cr B in Water</i>	
Hexavalent Chromium	NY,CT,NH,RI,ME,VA,NC
<i>SM21-22 4500 CL G in Water</i>	
Chlorine, Residual	CT,MA,RI,ME
<i>SM21-22 4500 CN E in Water</i>	
Cyanide	CT,MA,NH,NY,RI,NC,ME,VA
<i>SW-846 1030 in Soil</i>	
Ignitability	NY,NH,CT,NC,ME,VA
<i>SW-846 6010C-D in Soil</i>	
Arsenic	CT,NH,NY,ME,VA,NC
Barium	CT,NH,NY,ME,VA,NC
Cadmium	CT,NH,NY,ME,VA,NC
Chromium	CT,NH,NY,ME,VA,NC
Lead	CT,NH,NY,AIHA,ME,VA,NC
Selenium	CT,NH,NY,ME,VA,NC
Silver	CT,NH,NY,ME,VA,NC
<i>SW-846 7471B in Soil</i>	
Mercury	CT,NH,NY,NC,ME,VA
<i>SW-846 8015C in Water</i>	
Ethanol	NY

CERTIFICATIONS
Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8082A in Soil</i>	
Aroclor-1016	CT,NH,NY,NC,ME,VA
Aroclor-1016 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1221	CT,NH,NY,NC,ME,VA
Aroclor-1221 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1232	CT,NH,NY,NC,ME,VA
Aroclor-1232 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1242	CT,NH,NY,NC,ME,VA
Aroclor-1242 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1248	CT,NH,NY,NC,ME,VA
Aroclor-1248 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1254	CT,NH,NY,NC,ME,VA
Aroclor-1254 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1260	CT,NH,NY,NC,ME,VA
Aroclor-1260 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1262	NH,NY,NC,ME,VA
Aroclor-1262 [2C]	NH,NY,NC,ME,VA
Aroclor-1268	NH,NY,NC,ME,VA
Aroclor-1268 [2C]	NH,NY,NC,ME,VA
<i>SW-846 8260C in Soil</i>	
Acetone	CT,NH,NY,ME
Benzene	CT,NH,NY,ME
Bromobenzene	NH,NY,ME
Bromochloromethane	NH,NY,ME
Bromodichloromethane	CT,NH,NY,ME
Bromoform	CT,NH,NY,ME
Bromomethane	CT,NH,NY,ME
2-Butanone (MEK)	CT,NH,NY,ME
n-Butylbenzene	CT,NH,NY,ME
sec-Butylbenzene	CT,NH,NY,ME
tert-Butylbenzene	CT,NH,NY,ME
Carbon Disulfide	CT,NH,NY,ME
Carbon Tetrachloride	CT,NH,NY,ME
Chlorobenzene	CT,NH,NY,ME
Chlorodibromomethane	CT,NH,NY,ME
Chloroethane	CT,NH,NY,ME
Chloroform	CT,NH,NY,ME
Chloromethane	CT,NH,NY,ME
2-Chlorotoluene	CT,NH,NY,ME
4-Chlorotoluene	CT,NH,NY,ME
Dibromomethane	NH,NY,ME
1,2-Dichlorobenzene	CT,NH,NY,ME
1,3-Dichlorobenzene	CT,NH,NY,ME
1,4-Dichlorobenzene	CT,NH,NY,ME
Dichlorodifluoromethane (Freon 12)	NY,ME
1,1-Dichloroethane	CT,NH,NY,ME
1,2-Dichloroethane	CT,NH,NY,ME

CERTIFICATIONS
Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8260C in Soil</i>	
1,1-Dichloroethylene	CT,NH,NY,ME
cis-1,2-Dichloroethylene	CT,NH,NY,ME
trans-1,2-Dichloroethylene	CT,NH,NY,ME
1,2-Dichloropropane	CT,NH,NY,ME
1,3-Dichloropropane	NH,NY,ME
2,2-Dichloropropane	NH,NY,ME
1,1-Dichloropropene	NH,NY,ME
cis-1,3-Dichloropropene	CT,NH,NY,ME
trans-1,3-Dichloropropene	CT,NH,NY,ME
1,4-Dioxane	NY
Ethylbenzene	CT,NH,NY,ME
Hexachlorobutadiene	NH,NY,ME
2-Hexanone (MBK)	CT,NH,NY,ME
Isopropylbenzene (Cumene)	CT,NH,NY,ME
p-Isopropyltoluene (p-Cymene)	NH,NY
Methyl tert-Butyl Ether (MTBE)	NH,NY
Methylene Chloride	CT,NH,NY,ME
4-Methyl-2-pentanone (MIBK)	CT,NH,NY
Naphthalene	NH,NY,ME
n-Propylbenzene	NH,NY
Styrene	CT,NH,NY,ME
1,1,1,2-Tetrachloroethane	CT,NH,NY,ME
1,1,2,2-Tetrachloroethane	CT,NH,NY,ME
Tetrachloroethylene	CT,NH,NY,ME
Toluene	CT,NH,NY,ME
1,2,3-Trichlorobenzene	NY
1,2,4-Trichlorobenzene	NH,NY,ME
1,1,1-Trichloroethane	CT,NH,NY,ME
1,1,2-Trichloroethane	CT,NH,NY,ME
Trichloroethylene	CT,NH,NY,ME
Trichlorofluoromethane (Freon 11)	CT,NH,NY,ME
1,2,3-Trichloropropane	NH,NY,ME
1,2,4-Trimethylbenzene	CT,NH,NY,ME
1,3,5-Trimethylbenzene	CT,NH,NY,ME
Vinyl Chloride	CT,NH,NY,ME
m+p Xylene	CT,NH,NY,ME
o-Xylene	CT,NH,NY,ME
<i>SW-846 8270D in Soil</i>	
Acenaphthene	CT,NY,NH
Acenaphthylene	CT,NY,NH
Acetophenone	NY,NH
Aniline	NY,NH
Anthracene	CT,NY,NH
Benzo(a)anthracene	CT,NY,NH
Benzo(a)pyrene	CT,NY,NH
Benzo(b)fluoranthene	CT,NY,NH

CERTIFICATIONS
Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8270D in Soil</i>	
Benzo(g,h,i)perylene	CT,NY,NH
Benzo(k)fluoranthene	CT,NY,NH
Bis(2-chloroethoxy)methane	CT,NY,NH
Bis(2-chloroethyl)ether	CT,NY,NH
Bis(2-chloroisopropyl)ether	CT,NY,NH
Bis(2-Ethylhexyl)phthalate	CT,NY,NH
4-Bromophenylphenylether	CT,NY,NH
Butylbenzylphthalate	CT,NY,NH
4-Chloroaniline	CT,NY,NH
2-Chloronaphthalene	CT,NY,NH
2-Chlorophenol	CT,NY,NH
Chrysene	CT,NY,NH
Dibenz(a,h)anthracene	CT,NY,NH
Dibenzofuran	CT,NY,NH
Di-n-butylphthalate	CT,NY,NH
1,2-Dichlorobenzene	NY,NH
1,3-Dichlorobenzene	NY,NH
1,4-Dichlorobenzene	NY,NH
3,3-Dichlorobenzidine	CT,NY,NH
2,4-Dichlorophenol	CT,NY,NH
Diethylphthalate	CT,NY,NH
2,4-Dimethylphenol	CT,NY,NH
Dimethylphthalate	CT,NY,NH
2,4-Dinitrophenol	CT,NY,NH
2,4-Dinitrotoluene	CT,NY,NH
2,6-Dinitrotoluene	CT,NY,NH
Di-n-octylphthalate	CT,NY,NH
1,2-Diphenylhydrazine (as Azobenzene)	NY,NH
Fluoranthene	CT,NY,NH
Fluorene	NY,NH
Hexachlorobenzene	CT,NY,NH
Hexachlorobutadiene	CT,NY,NH
Hexachloroethane	CT,NY,NH
Indeno(1,2,3-cd)pyrene	CT,NY,NH
Isophorone	CT,NY,NH
2-Methylnaphthalene	CT,NY,NH
2-Methylphenol	CT,NY,NH
3/4-Methylphenol	CT,NY,NH
Naphthalene	CT,NY,NH
Nitrobenzene	CT,NY,NH
2-Nitrophenol	CT,NY,NH
4-Nitrophenol	CT,NY,NH
Pentachlorophenol	CT,NY,NH
Phenanthrene	CT,NY,NH
Phenol	CT,NY,NH
Pyrene	CT,NY,NH
1,2,4-Trichlorobenzene	CT,NY,NH

CERTIFICATIONS
Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8270D in Soil</i>	
2,4,5-Trichlorophenol	CT,NY,NH
2,4,6-Trichlorophenol	CT,NY,NH
<i>SW-846 8270D in Water</i>	
Acenaphthene	CT,NY,NC,ME,NH,VA,NJ
Acenaphthylene	CT,NY,NC,ME,NH,VA,NJ
Acetophenone	NY,NC
Aniline	CT,NY,NC,ME,VA,NJ
Anthracene	CT,NY,NC,ME,NH,VA,NJ
Benzidine	CT,NY,NC,ME,NH,VA,NJ
Benzo(a)anthracene	CT,NY,NC,ME,NH,VA,NJ
Benzo(a)pyrene	CT,NY,NC,ME,NH,VA,NJ
Benzo(b)fluoranthene	CT,NY,NC,ME,NH,VA,NJ
Benzo(g,h,i)perylene	CT,NY,NC,ME,NH,VA,NJ
Benzo(k)fluoranthene	CT,NY,NC,ME,NH,VA,NJ
Bis(2-chloroethoxy)methane	CT,NY,NC,ME,NH,VA,NJ
Bis(2-chloroethyl)ether	CT,NY,NC,ME,NH,VA,NJ
Bis(2-chloroisopropyl)ether	CT,NY,NC,ME,NH,VA,NJ
Bis(2-Ethylhexyl)phthalate	CT,NY,NC,ME,NH,VA,NJ
4-Bromophenylphenylether	CT,NY,NC,ME,NH,VA,NJ
Butylbenzylphthalate	CT,NY,NC,ME,NH,VA,NJ
4-Chloroaniline	CT,NY,NC,ME,NH,VA,NJ
4-Chloro-3-methylphenol	CT,NY,NC,ME,NH,VA,NJ
2-Chloronaphthalene	CT,NY,NC,ME,NH,VA,NJ
2-Chlorophenol	CT,NY,NC,ME,NH,VA,NJ
4-Chlorophenylphenylether	CT,NY,NC,ME,NH,VA,NJ
Chrysene	CT,NY,NC,ME,NH,VA,NJ
Dibenz(a,h)anthracene	CT,NY,NC,ME,NH,VA,NJ
Dibenzofuran	CT,NY,NC,ME,NH,VA,NJ
Di-n-butylphthalate	CT,NY,NC,ME,NH,VA,NJ
1,2-Dichlorobenzene	CT,NY,NC,ME,NH,VA,NJ
1,3-Dichlorobenzene	CT,NY,NC,ME,NH,VA,NJ
1,4-Dichlorobenzene	CT,NY,NC,ME,NH,VA,NJ
3,3-Dichlorobenzidine	CT,NY,NC,ME,NH,VA,NJ
2,4-Dichlorophenol	CT,NY,NC,ME,NH,VA,NJ
Diethylphthalate	CT,NY,NC,ME,NH,VA,NJ
2,4-Dimethylphenol	CT,NY,NC,ME,NH,VA,NJ
Dimethylphthalate	CT,NY,NC,ME,NH,VA,NJ
4,6-Dinitro-2-methylphenol	CT,NY,NC,ME,NH,VA,NJ
2,4-Dinitrophenol	CT,NY,NC,ME,NH,VA,NJ
2,4-Dinitrotoluene	CT,NY,NC,ME,NH,VA,NJ
2,6-Dinitrotoluene	CT,NY,NC,ME,NH,VA,NJ
Di-n-octylphthalate	CT,NY,NC,ME,NH,VA,NJ
1,2-Diphenylhydrazine (as Azobenzene)	NY,NC,ME
Fluoranthene	CT,NY,NC,ME,NH,VA,NJ
Fluorene	NY,NC,ME,NH,VA,NJ
Hexachlorobenzene	CT,NY,NC,ME,NH,VA,NJ

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8270D in Water</i>	
Hexachlorobutadiene	CT,NY,NC,ME,NH,VA,NJ
Hexachlorocyclopentadiene	CT,NY,NC,ME,NH,VA,NJ
Hexachloroethane	CT,NY,NC,ME,NH,VA,NJ
Indeno(1,2,3-cd)pyrene	CT,NY,NC,ME,NH,VA,NJ
Isophorone	CT,NY,NC,ME,NH,VA,NJ
2-Methylnaphthalene	CT,NY,NC,ME,NH,VA,NJ
2-Methylphenol	CT,NY,NC,NH,VA,NJ
3/4-Methylphenol	CT,NY,NC,NH,VA,NJ
Naphthalene	CT,NY,NC,ME,NH,VA,NJ
Nitrobenzene	CT,NY,NC,ME,NH,VA,NJ
2-Nitrophenol	CT,NY,NC,ME,NH,VA,NJ
4-Nitrophenol	CT,NY,NC,ME,NH,VA,NJ
N-Nitrosodimethylamine	CT,NY,NC,ME,NH,VA,NJ
N-Nitrosodiphenylamine	CT,NY,NC,ME,NH,VA,NJ
N-Nitrosodi-n-propylamine	CT,NY,NC,ME,NH,VA,NJ
Pentachlorophenol	CT,NY,NC,ME,NH,VA,NJ
Phenanthrene	CT,NY,NC,ME,NH,VA,NJ
Phenol	CT,NY,NC,ME,NH,VA,NJ
Pyrene	CT,NY,NC,ME,NH,VA,NJ
1,2,4-Trichlorobenzene	CT,NY,NC,ME,NH,VA,NJ
2,4,5-Trichlorophenol	CT,NY,NC,ME,NH,VA,NJ
2,4,6-Trichlorophenol	CT,NY,NC,ME,NH,VA,NJ
2-Fluorophenol	NC,VA
Phenol-d6	VA
Nitrobenzene-d5	VA

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2005	100033	03/1/2018
MA	Massachusetts DEP	M-MA100	06/30/2018
CT	Connecticut Department of Public Health	PH-0567	09/30/2019
NY	New York State Department of Health	10899 NELAP	04/1/2018
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2019
RI	Rhode Island Department of Health	LAO00112	12/30/2018
NC	North Carolina Div. of Water Quality	652	12/31/2018
NJ	New Jersey DEP	MA007 NELAP	06/30/2018
FL	Florida Department of Health	E871027 NELAP	06/30/2018
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2018
ME	State of Maine	2011028	06/9/2019
VA	Commonwealth of Virginia	460217	12/14/2018
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2018
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2018
NC-DW	North Carolina Department of Health	25703	07/31/2018



Phone: 413-525-2332

Fax: 413-525-6405

Email: info@contestlabs.com

Company Name: **Lightship Engineering**
Address: **39 Industrial Park Rd**
Phone: **508-830-2344**

Project Name: **500.98.12**

Project Location: **South Boston**

Project Number: **500.98.12**

Project Manager: **Kevin Paradise**

Con-Test Quote Name/Number:

Invoice Recipient: **Eversource Att: Matt Waldrip**

Sampled By: **Xuan Hu**

Doc # 381 Rev 1_03242017

39 Spruce Street
East Longmeadow, MA 01028

Page 1 of 1

Requested Turnaround Time
7-Day ☐ 10-Day ☐
Due Date:
Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☒ 4-Day ☐
Data Delivery
Format: PDF ☒ EXCEL ☐
Other:
CLP Like Data Pkg Required: ☐
Email To: **Paradise@lightship**
Fax To #:

Con-Test Work Order #	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	Composite	Grab	Matrix Code	Conc Code
1	LE-WC29	2/10/18	1330	SX	SX	S	
2	LE-TAW2	2/12/18	1445			GW	

Comments:

Bill to Eversource Att: Matt Waldrip

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

Relinquished by: (signature) **[Signature]** Date/Time: **2/12/18 1650**
Received by: (signature) **[Signature]** Date/Time: **2/12/18 1650**
Relinquished by: (signature) **[Signature]** Date/Time: **2/12/18 1945**
Relinquished by: (signature) **[Signature]** Date/Time: **2/12/18 1945**
Relinquished by: (signature) **[Signature]** Date/Time: **2/12/18 1945**
Relinquished by: (signature) **[Signature]** Date/Time: **2/12/18 1945**

Detection Limit Requirements
MA ☐ MA MCP Required ☐
MCP Certification Form Required ☐
CT ☐ CT RCP Required ☐
RCP Certification Form Required ☐
MA State DW Required ☐
PWSID #



Project Entity

Government ☐
Federal ☐
City ☐

Municipality ☐
21 J ☐
Brownfield ☐

MWRA ☐
School ☐
MBTA ☐

WRTA ☐
Chromatogram ☐
AIHA-LAP, LLC ☐


con-test®
 ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

Login Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False Statement will be brought to the attention of the Client - State True or False

 Client Lightship Engineering
 Received By SL

 Date 2-12-18 Time 19:45

 How were the samples received? In Cooler T No Cooler On Ice T No Ice
 Direct from Sampling Ambient Melted Ice

 Were samples within Temperature? 2-6°C T By Gun # 577 Actual Temp - 3.6

 Was Custody Seal Intact? NA By Blank # Actual Temp -

 Was COC Relinquished? T Were Samples Tampered with? NA

 Are there broken/leaking/loose caps on any samples? F Does Chain Agree With Samples? T

 Is COC in ink/ Legible? T Were samples received within holding time? T

 Did COC include all pertinent Information? Client T Analysis T Sampler Name T
 Project T ID's T Collection Dates/Times T

 Are Sample labels filled out and legible? T

 Are there Lab to Filters? F Who was notified?

 Are there Rushes? T Who was notified? Luke, Mike

 Are there Short Holds? OK T Who was notified? WKE

 Is there enough Volume? T

 Is there Headspace where applicable? F

 Proper Media/Containers Used? T

 Were trip blanks received? F

 Do all samples have the proper pH?

 MS/MSD? F Is splitting samples required? F
 On COC? F

 Acid PH-1 Base 9

Vials	#	Containers:			#		#
Unp-		1 Liter Amb.	9	1 Liter Plastic	1	16 oz Amb.	1
HCL-	9	500 mL Amb.		500 mL Plastic	2	8oz Amb/Clear	
Meoh-	1	250 mL Amb.		250 mL Plastic	2	4oz Amb/Clear	
Bisulfate-	2	Col./Bacteria		Flashpoint		2oz Amb/Clear	
DI-		Other Plastic		Other Glass		Encore	
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:	
Sulfuric-		Perchlorate		Ziplock			

Unused Media

Unused Media							
Vials	#	Containers:	#		#		#
Unp-		1 Liter Amb.		1 Liter Plastic		16 oz Amb.	
HCL-		500 mL Amb.		500 mL Plastic		8oz Amb/Clear	
Meoh-		250 mL Amb.		250 mL Plastic		4oz Amb/Clear	
Bisulfate-		Col./Bacteria		Flashpoint		2oz Amb/Clear	
DI-		Other Plastic		Other Glass		Encore	
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:	
Sulfuric-		Perchlorate		Ziplock			
Comments:							

Comments:

MADEP MCP Analytical Method Report Certification Form

Laboratory Name: Con-Test Analytical Laboratory		Project #: 18B0416	
Project Location: South Boston, MA		RTN:	
This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)] 18B0416-01 thru 18B0416-02			
Matrices: Soil		Water	
CAM Protocol (check all that below)			
8260 VOC CAM II A (X)	7470/7471 Hg CAM IIIB (X)	MassDEP VPH CAM IV A ()	8081 Pesticides CAM V B ()
8270 SVOC CAM II B (X)	7010 Metals CAM III C ()	MassDEP EPH CAM IV A (X)	8151 Herbicides CAM V C ()
6010 Metals CAM III A (X)	6020 Metals CAM III D ()	8082 PCB CAM V A (X)	9014 Total Cyanide/PAC CAM VI A ()
7196 Hex Cr CAM VI B ()	MassDEP APH CAM IX A ()	8330 Explosives CAM VIII A ()	TO-15 VOC CAM IX B ()
6860 Perchlorate CAM VIII B ()			
Affirmative response to Questions A through F is required for "Presumptive Certainty" status			
A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?		☒ Yes ☐ No ¹
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?		☒ Yes ☐ No ¹
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?		☒ Yes ☐ No ¹
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data?		☒ Yes ☐ No ¹
E a	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).		☐ Yes ☐ No ¹
E b	APH and TO-15 Methods only: Was the complete analyte list reported for each method?		☐ Yes ☐ No ¹
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all No responses to Questions A through E)?		☒ Yes ☐ No ¹
A response to questions G, H and I below is required for "Presumptive Certainty" status			
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?		☒ Yes ☐ No ¹
Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.			
H	Were all QC performance standards specified in the CAM protocol(s) achieved?		☐ Yes ☒ No ¹
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?		☐ Yes ☒ No ¹
¹ All Negative responses must be addressed in an attached Environmental Laboratory case narrative.			
I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.			
Signature: <u>Lisa A. Worthington</u>		Position: Project Manager	
Printed Name: Lisa A. Worthington		Date: 02/19/18	

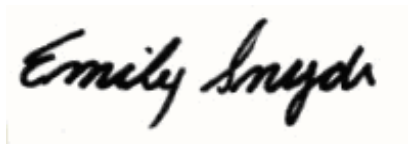
February 19, 2018

Kevin Paradise
Lightship Engineering, LLC
39 Industrial Park Road
Plymouth, MA 02360

Project Location: South Boston, MA
Client Job Number:
Project Number: 500.98.12
Laboratory Work Order Number: 18B0433

Enclosed are results of analyses for samples received by the laboratory on February 13, 2018. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Emily Snyder". The signature is written in a cursive, flowing style.

Emily E. Snyder
Project Manager

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REPORT DATE: 2/19/2018

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 500.98.12

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 18B0433

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: South Boston, MA

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CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

For method 6010, only RCRA 8 metals were requested and reported.

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

EPA 200.8**Qualifications:****DL-15**

Sample required a dilution due to low internal standard recovery of the lesser diluted digestion, reporting limit is elevated.

Analyte & Samples(s) Qualified:**Antimony**

18B0433-02[LE-TMW3]

Arsenic

18B0433-02[LE-TMW3]

Cadmium

18B0433-02[LE-TMW3]

Chromium

18B0433-02[LE-TMW3]

Copper

18B0433-02[LE-TMW3]

Lead

18B0433-02[LE-TMW3]

Nickel

18B0433-02[LE-TMW3]

Selenium

18B0433-02[LE-TMW3]

Silver

18B0433-02[LE-TMW3]

Zinc

18B0433-02[LE-TMW3]

Ja

Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated concentration (CLP J-Flag).

Analyte & Samples(s) Qualified:**Selenium**

18B0433-02[LE-TMW3]

EPA 625**Qualifications:****L-07**

Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.

Analyte & Samples(s) Qualified:**N-Nitrosodimethylamine**

B196705-BSD1

V-04

Initial calibration did not meet method specifications. Compound was calibrated using a response factor where %RSD is outside of method specified criteria. Reported result is estimated.

Analyte & Samples(s) Qualified:**2,4-Dinitrophenol**

B196705-BLK1, B196705-BS1, B196705-BSD1

Benzidine

18B0433-02[LE-TMW3]

V-05

Continuing calibration did not meet method specifications and was biased on the low side for this compound. Reported result is estimated.

Analyte & Samples(s) Qualified:**Benzidine**

18B0433-02[LE-TMW3], B196705-BLK1, B196705-BS1, B196705-BSD1

V-19

Initial calibration did not meet method specifications. Compound was calibrated using linear regression with correlation coefficient <0.99. Reported result is estimated.

Analyte & Samples(s) Qualified:**Hexachlorocyclopentadiene**

B196705-BLK1, B196705-BS1, B196705-BSD1

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V-20

Continuing calibration did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

Analyte & Samples(s) Qualified:**2,4-Dinitrophenol**

18B0433-02[LE-TMW3]

Benzo(g,h,i)perylene

B196705-BLK1, B196705-BS1, B196705-BSD1

Bis(2-Ethylhexyl)phthalate

B196705-BLK1, B196705-BS1, B196705-BSD1

Dimethylphthalate

B196705-BLK1, B196705-BS1, B196705-BSD1

Di-n-butylphthalate

B196705-BLK1, B196705-BS1, B196705-BSD1

Di-n-octylphthalate

B196705-BLK1, B196705-BS1, B196705-BSD1

Hexachlorobutadiene

18B0433-02[LE-TMW3]

V-34

Initial calibration verification (ICV) did not meet method specifications and was biased on the low side for this compound. Reported result is estimated.

Analyte & Samples(s) Qualified:**3,3-Dichlorobenzidine**

18B0433-02[LE-TMW3], B196705-BLK1, B196705-BS1, B196705-BSD1

SM21-22 4500 CL G**Qualifications:****Z-01**

SM4500 test had a calibration point outside acceptable back calculated recovery. Reanalysis yielded similar non-conformance.

Analyte & Samples(s) Qualified:**Chlorine, Residual**

18B0433-02[LE-TMW3]

SW-846 6010C-D**Qualifications:****M-10**

The reporting limit verification for the AIHA lead program is outside of control limits for this element. Any reported result at or near the detection limit may be biased on the high side.

Analyte & Samples(s) Qualified:**Lead**

18B0433-01[LE-WC26], B196818-MRL1

SW-846 7471B**Qualifications:****L-07**

Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.

Analyte & Samples(s) Qualified:**Mercury**

B196773-BS1

SW-846 8082A**Qualifications:****O-32**

A dilution was performed as part of the standard analytical procedure.

Analyte & Samples(s) Qualified:

18B0433-01[LE-WC26]

SW-846 8260C**Qualifications:**

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L-04

Laboratory fortified blank/laboratory control sample recovery and duplicate recovery are outside of control limits. Reported value for this compound is likely to be biased on the low side.

Analyte & Samples(s) Qualified:**2,2-Dichloropropane**

18B0433-01[LE-WC26], B196829-BLK1, B196829-BS1, B196829-BSD1

R-05

Laboratory fortified blank duplicate RPD is outside of control limits. Reduced precision is anticipated for any reported value for this compound.

Analyte & Samples(s) Qualified:**Bromomethane**

18B0433-01[LE-WC26], B196829-BLK1, B196829-BS1, B196829-BSD1

V-05

Continuing calibration did not meet method specifications and was biased on the low side for this compound. Reported result is estimated.

Analyte & Samples(s) Qualified:**2,2-Dichloropropane**

18B0433-01[LE-WC26], B196829-BLK1, B196829-BS1, B196829-BSD1

Dichlorodifluoromethane (Freon 1:

18B0433-01[LE-WC26], B196829-BLK1, B196829-BS1, B196829-BSD1

V-16

Response factor is less than method specified minimum acceptable value. Reduced precision and accuracy may be associated with reported result.

Analyte & Samples(s) Qualified:**1,4-Dioxane**

18B0433-01[LE-WC26], B196829-BLK1, B196829-BS1, B196829-BSD1

V-20

Continuing calibration did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

Analyte & Samples(s) Qualified:**1,1,2,2-Tetrachloroethane**

B196829-BS1, B196829-BSD1

1,2,3-Trichloropropane

B196829-BS1, B196829-BSD1

V-34

Initial calibration verification (ICV) did not meet method specifications and was biased on the low side for this compound. Reported result is estimated.

Analyte & Samples(s) Qualified:**Bromomethane**

18B0433-01[LE-WC26], B196829-BLK1, B196829-BS1, B196829-BSD1

SW-846 8270D**Qualifications:****Ja**

Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated concentration (CLP J-Flag).

Analyte & Samples(s) Qualified:**Bis(2-Ethylhexyl)phthalate**

18B0433-02[LE-TMW3], B196787-BLK1

L-04

Laboratory fortified blank/laboratory control sample recovery and duplicate recovery are outside of control limits. Reported value for this compound is likely to be biased on the low side.

Analyte & Samples(s) Qualified:**Aniline**

18B0433-01[LE-WC26], B196704-BLK1, B196704-BS1, B196704-BSD1

L-07

Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.

Analyte & Samples(s) Qualified:**2,4-Dinitrophenol**

B196704-BSD1

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R-05

Laboratory fortified blank duplicate RPD is outside of control limits. Reduced precision is anticipated for any reported value for this compound.

Analyte & Samples(s) Qualified:**Benzo(g,h,i)perylene**

18B0433-01[LE-WC26], B196704-BLK1, B196704-BS1, B196704-BSD1

Butylbenzylphthalate

18B0433-01[LE-WC26], B196704-BLK1, B196704-BS1, B196704-BSD1

Pyrene

18B0433-01[LE-WC26], B196704-BLK1, B196704-BS1, B196704-BSD1

V-04

Initial calibration did not meet method specifications. Compound was calibrated using a response factor where %RSD is outside of method specified criteria. Reported result is estimated.

Analyte & Samples(s) Qualified:**2,4-Dinitrophenol**

B196704-BLK1, B196704-BS1, B196704-BSD1

V-05

Continuing calibration did not meet method specifications and was biased on the low side for this compound. Reported result is estimated.

Analyte & Samples(s) Qualified:**Aniline**

18B0433-01[LE-WC26]

V-06

Continuing calibration did not meet method specifications and was biased on the high side for this compound. Reported result is estimated.

Analyte & Samples(s) Qualified:**Benzo(g,h,i)perylene**

B196704-BS1, B196704-BSD1

Dimethylphthalate

B196704-BS1, B196704-BSD1

Di-n-butylphthalate

B196704-BS1, B196704-BSD1

Di-n-octylphthalate

B196704-BS1, B196704-BSD1

V-20

Continuing calibration did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

Analyte & Samples(s) Qualified:**2,4-Dinitrophenol**

18B0433-01[LE-WC26]

Benzo(g,h,i)perylene

B196704-BLK1

Dimethylphthalate

B196704-BLK1

Di-n-butylphthalate

B196704-BLK1

Di-n-octylphthalate

B196704-BLK1

Hexachlorobutadiene

18B0433-01[LE-WC26]

V-34

Initial calibration verification (ICV) did not meet method specifications and was biased on the low side for this compound. Reported result is estimated.

Analyte & Samples(s) Qualified:**3,3-Dichlorobenzidine**

18B0433-01[LE-WC26], B196704-BLK1, B196704-BS1, B196704-BSD1

4-Chloroaniline

18B0433-01[LE-WC26], B196704-BLK1, B196704-BS1, B196704-BSD1

Aniline

B196704-BLK1, B196704-BS1, B196704-BSD1

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MADEP-EPH-04-1.1

SPE cartridge contamination with non-petroleum compounds, if present, is verified by GC/MS in each method blank per extraction batch and excluded from C11-C22 aromatic range fraction in all samples in the batch. No significant modifications were made to the method.

SW-846 6010C/D SW-846 6020A/B

For NC, Metals methods SW-846 6010D and SW-846 6020B are followed, and for all other states methods SW-846 6010C and SW-846 6020A are followed.

SW-846 8100 Modified

TPH (C9-C36) is quantitated against a calibration made with a diesel standard.

SW-846 8260C

Laboratory control sample recoveries for required MCP Data Enhancement 8260 compounds were all within limits specified by the method except for "difficult analytes" where recovery control limits of 40-160% are used and/or unless otherwise listed in this narrative. Difficult analytes: MIBK, MEK, acetone, 1,4-dioxane, chloromethane, dichlorodifluoromethane, 2-hexanone, and bromomethane.

SW-846 8270D

Laboratory control sample recoveries for required MCP Data Enhancement 8270 compounds were all within control limits specified by the method, 40-140% for base/neutrals and 30-130% for acids except for "difficult analytes" listed below and/or otherwise listed in this narrative. Difficult analytes limits are 15 and 140%: 2,4-dinitrophenol, 4-chloroaniline, 4-nitrophenol, and phenol.

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

A handwritten signature in black ink, appearing to read "Lisa A. Worthington", is written over a light gray rectangular background.

Lisa A. Worthington
Project Manager

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: South Boston, MA

Sample Description:

Work Order: 18B0433

Date Received: 2/13/2018

Field Sample #: LE-TMW3

Sampled: 2/13/2018 10:00

Sample ID: 18B0433-02

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	50	9.7	µg/L	1		EPA 624	2/14/18	2/14/18 8:08	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.50	0.11	µg/L	1		EPA 624	2/14/18	2/14/18 8:08	MFF
Benzene	ND	1.0	0.12	µg/L	1		EPA 624	2/14/18	2/14/18 8:08	MFF
Bromodichloromethane	ND	2.0	0.30	µg/L	1		EPA 624	2/14/18	2/14/18 8:08	MFF
Bromoform	ND	2.0	0.21	µg/L	1		EPA 624	2/14/18	2/14/18 8:08	MFF
Bromomethane	ND	5.0	0.94	µg/L	1		EPA 624	2/14/18	2/14/18 8:08	MFF
tert-Butyl Alcohol (TBA)	ND	20	2.2	µg/L	1		EPA 624	2/14/18	2/14/18 8:08	MFF
Carbon Tetrachloride	ND	2.0	0.25	µg/L	1		EPA 624	2/14/18	2/14/18 8:08	MFF
Chlorobenzene	ND	2.0	0.16	µg/L	1		EPA 624	2/14/18	2/14/18 8:08	MFF
Chlorodibromomethane	ND	2.0	0.10	µg/L	1		EPA 624	2/14/18	2/14/18 8:08	MFF
Chloroethane	ND	2.0	0.28	µg/L	1		EPA 624	2/14/18	2/14/18 8:08	MFF
Chloroform	ND	2.0	0.22	µg/L	1		EPA 624	2/14/18	2/14/18 8:08	MFF
Chloromethane	ND	2.0	0.55	µg/L	1		EPA 624	2/14/18	2/14/18 8:08	MFF
1,2-Dichlorobenzene	ND	2.0	0.17	µg/L	1		EPA 624	2/14/18	2/14/18 8:08	MFF
1,3-Dichlorobenzene	ND	2.0	0.17	µg/L	1		EPA 624	2/14/18	2/14/18 8:08	MFF
1,4-Dichlorobenzene	ND	2.0	0.15	µg/L	1		EPA 624	2/14/18	2/14/18 8:08	MFF
1,2-Dichloroethane	ND	2.0	0.19	µg/L	1		EPA 624	2/14/18	2/14/18 8:08	MFF
1,1-Dichloroethane	ND	2.0	0.16	µg/L	1		EPA 624	2/14/18	2/14/18 8:08	MFF
1,1-Dichloroethylene	ND	2.0	0.21	µg/L	1		EPA 624	2/14/18	2/14/18 8:08	MFF
trans-1,2-Dichloroethylene	ND	2.0	0.15	µg/L	1		EPA 624	2/14/18	2/14/18 8:08	MFF
1,2-Dichloropropane	ND	2.0	0.13	µg/L	1		EPA 624	2/14/18	2/14/18 8:08	MFF
cis-1,3-Dichloropropene	ND	2.0	0.12	µg/L	1		EPA 624	2/14/18	2/14/18 8:08	MFF
1,4-Dioxane	ND	50	26	µg/L	1		EPA 624	2/14/18	2/14/18 8:08	MFF
trans-1,3-Dichloropropene	ND	2.0	0.11	µg/L	1		EPA 624	2/14/18	2/14/18 8:08	MFF
Ethylbenzene	ND	2.0	0.13	µg/L	1		EPA 624	2/14/18	2/14/18 8:08	MFF
Methyl tert-Butyl Ether (MTBE)	ND	2.0	0.090	µg/L	1		EPA 624	2/14/18	2/14/18 8:08	MFF
Methylene Chloride	ND	5.0	3.2	µg/L	1		EPA 624	2/14/18	2/14/18 8:08	MFF
1,1,2,2-Tetrachloroethane	ND	2.0	0.16	µg/L	1		EPA 624	2/14/18	2/14/18 8:08	MFF
Tetrachloroethylene	ND	2.0	0.27	µg/L	1		EPA 624	2/14/18	2/14/18 8:08	MFF
Toluene	ND	1.0	0.17	µg/L	1		EPA 624	2/14/18	2/14/18 8:08	MFF
1,1,1-Trichloroethane	ND	2.0	0.13	µg/L	1		EPA 624	2/14/18	2/14/18 8:08	MFF
1,1,2-Trichloroethane	ND	2.0	0.24	µg/L	1		EPA 624	2/14/18	2/14/18 8:08	MFF
Trichloroethylene	ND	2.0	0.20	µg/L	1		EPA 624	2/14/18	2/14/18 8:08	MFF
Trichlorofluoromethane (Freon 11)	ND	2.0	0.15	µg/L	1		EPA 624	2/14/18	2/14/18 8:08	MFF
Vinyl Chloride	ND	2.0	0.13	µg/L	1		EPA 624	2/14/18	2/14/18 8:08	MFF
m+p Xylene	ND	2.0	0.26	µg/L	1		EPA 624	2/14/18	2/14/18 8:08	MFF
o-Xylene	ND	2.0	0.13	µg/L	1		EPA 624	2/14/18	2/14/18 8:08	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	97.1	70-130	2/14/18 8:08
Toluene-d8	101	70-130	2/14/18 8:08
4-Bromofluorobenzene	95.4	70-130	2/14/18 8:08

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: South Boston, MA

Sample Description:

Work Order: 18B0433

Date Received: 2/13/2018

Field Sample #: LE-TMW3

Sampled: 2/13/2018 10:00

Sample ID: 18B0433-02

Sample Matrix: Ground Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Benzo(a)anthracene	ND	0.050	0.050	µg/L	1		SW-846 8270D	2/13/18	2/15/18 12:39	CJM
Benzo(a)pyrene	ND	0.10	0.10	µg/L	1		SW-846 8270D	2/13/18	2/15/18 12:39	CJM
Benzo(b)fluoranthene	ND	0.050	0.050	µg/L	1		SW-846 8270D	2/13/18	2/15/18 12:39	CJM
Benzo(k)fluoranthene	ND	0.20	0.20	µg/L	1		SW-846 8270D	2/13/18	2/15/18 12:39	CJM
Bis(2-Ethylhexyl)phthalate	0.73	1.0	0.10	µg/L	1	Ja	SW-846 8270D	2/13/18	2/15/18 12:39	CJM
Chrysene	ND	0.20	0.20	µg/L	1		SW-846 8270D	2/13/18	2/15/18 12:39	CJM
Dibenz(a,h)anthracene	ND	0.20	0.20	µg/L	1		SW-846 8270D	2/13/18	2/15/18 12:39	CJM
Indeno(1,2,3-cd)pyrene	ND	0.20	0.20	µg/L	1		SW-846 8270D	2/13/18	2/15/18 12:39	CJM
Pentachlorophenol	ND	1.0	0.34	µg/L	1		SW-846 8270D	2/13/18	2/15/18 12:39	CJM
Surrogates	% Recovery		Recovery Limits		Flag/Qual					
2-Fluorophenol	48.0		15-110				2/15/18 12:39			
Phenol-d6	36.4		15-110				2/15/18 12:39			
Nitrobenzene-d5	70.4		30-130				2/15/18 12:39			
2-Fluorobiphenyl	71.1		30-130				2/15/18 12:39			
2,4,6-Tribromophenol	77.4		15-110				2/15/18 12:39			
p-Terphenyl-d14	58.7		30-130				2/15/18 12:39			

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: South Boston, MA

Sample Description:

Work Order: 18B0433

Date Received: 2/13/2018

Field Sample #: LE-TMW3

Sampled: 2/13/2018 10:00

Sample ID: 18B0433-02

Sample Matrix: Ground Water

Semivolatile Organic Compounds by - GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	5.0	µg/L	1		EPA 625	2/13/18	2/14/18 12:14	BGL
Acenaphthylene	ND	5.0	µg/L	1		EPA 625	2/13/18	2/14/18 12:14	BGL
Anthracene	ND	5.0	µg/L	1		EPA 625	2/13/18	2/14/18 12:14	BGL
Benzidine	ND	20	µg/L	1	V-04, V-05	EPA 625	2/13/18	2/14/18 12:14	BGL
Benzo(g,h,i)perylene	ND	5.0	µg/L	1		EPA 625	2/13/18	2/14/18 12:14	BGL
4-Bromophenylphenylether	ND	10	µg/L	1		EPA 625	2/13/18	2/14/18 12:14	BGL
Butylbenzylphthalate	ND	10	µg/L	1		EPA 625	2/13/18	2/14/18 12:14	BGL
4-Chloro-3-methylphenol	ND	10	µg/L	1		EPA 625	2/13/18	2/14/18 12:14	BGL
Bis(2-chloroethyl)ether	ND	10	µg/L	1		EPA 625	2/13/18	2/14/18 12:14	BGL
Bis(2-chloroisopropyl)ether	ND	10	µg/L	1		EPA 625	2/13/18	2/14/18 12:14	BGL
2-Chloronaphthalene	ND	10	µg/L	1		EPA 625	2/13/18	2/14/18 12:14	BGL
2-Chlorophenol	ND	10	µg/L	1		EPA 625	2/13/18	2/14/18 12:14	BGL
4-Chlorophenylphenylether	ND	10	µg/L	1		EPA 625	2/13/18	2/14/18 12:14	BGL
Di-n-butylphthalate	ND	10	µg/L	1		EPA 625	2/13/18	2/14/18 12:14	BGL
1,3-Dichlorobenzene	ND	5.0	µg/L	1		EPA 625	2/13/18	2/14/18 12:14	BGL
1,4-Dichlorobenzene	ND	5.0	µg/L	1		EPA 625	2/13/18	2/14/18 12:14	BGL
1,2-Dichlorobenzene	ND	5.0	µg/L	1		EPA 625	2/13/18	2/14/18 12:14	BGL
3,3-Dichlorobenzidine	ND	10	µg/L	1	V-34	EPA 625	2/13/18	2/14/18 12:14	BGL
2,4-Dichlorophenol	ND	10	µg/L	1		EPA 625	2/13/18	2/14/18 12:14	BGL
Diethylphthalate	ND	10	µg/L	1		EPA 625	2/13/18	2/14/18 12:14	BGL
2,4-Dimethylphenol	ND	10	µg/L	1		EPA 625	2/13/18	2/14/18 12:14	BGL
Dimethylphthalate	ND	10	µg/L	1		EPA 625	2/13/18	2/14/18 12:14	BGL
4,6-Dinitro-2-methylphenol	ND	10	µg/L	1		EPA 625	2/13/18	2/14/18 12:14	BGL
2,4-Dinitrophenol	ND	10	µg/L	1	V-20	EPA 625	2/13/18	2/14/18 12:14	BGL
2,4-Dinitrotoluene	ND	10	µg/L	1		EPA 625	2/13/18	2/14/18 12:14	BGL
2,6-Dinitrotoluene	ND	10	µg/L	1		EPA 625	2/13/18	2/14/18 12:14	BGL
Di-n-octylphthalate	ND	10	µg/L	1		EPA 625	2/13/18	2/14/18 12:14	BGL
1,2-Diphenylhydrazine (as Azobenzene)	ND	10	µg/L	1		EPA 625	2/13/18	2/14/18 12:14	BGL
Bis(2-Ethylhexyl)phthalate	ND	10	µg/L	1		EPA 625	2/13/18	2/14/18 12:14	BGL
Fluoranthene	ND	5.0	µg/L	1		EPA 625	2/13/18	2/14/18 12:14	BGL
Fluorene	ND	5.0	µg/L	1		EPA 625	2/13/18	2/14/18 12:14	BGL
Hexachlorobenzene	ND	10	µg/L	1		EPA 625	2/13/18	2/14/18 12:14	BGL
Hexachlorobutadiene	ND	10	µg/L	1	V-20	EPA 625	2/13/18	2/14/18 12:14	BGL
Hexachlorocyclopentadiene	ND	10	µg/L	1		EPA 625	2/13/18	2/14/18 12:14	BGL
Hexachloroethane	ND	10	µg/L	1		EPA 625	2/13/18	2/14/18 12:14	BGL
Isophorone	ND	10	µg/L	1		EPA 625	2/13/18	2/14/18 12:14	BGL
Naphthalene	ND	5.0	µg/L	1		EPA 625	2/13/18	2/14/18 12:14	BGL
Nitrobenzene	ND	10	µg/L	1		EPA 625	2/13/18	2/14/18 12:14	BGL
2-Nitrophenol	ND	10	µg/L	1		EPA 625	2/13/18	2/14/18 12:14	BGL
4-Nitrophenol	ND	10	µg/L	1		EPA 625	2/13/18	2/14/18 12:14	BGL
N-Nitrosodimethylamine	ND	10	µg/L	1		EPA 625	2/13/18	2/14/18 12:14	BGL
N-Nitrosodiphenylamine	ND	10	µg/L	1		EPA 625	2/13/18	2/14/18 12:14	BGL
N-Nitrosodi-n-propylamine	ND	10	µg/L	1		EPA 625	2/13/18	2/14/18 12:14	BGL
Pentachlorophenol	ND	10	µg/L	1		EPA 625	2/13/18	2/14/18 12:14	BGL

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Project Location: South Boston, MA

Sample Description:

Work Order: 18B0433

Date Received: 2/13/2018

Field Sample #: LE-TMW3

Sampled: 2/13/2018 10:00

Sample ID: 18B0433-02

Sample Matrix: Ground Water

Semivolatile Organic Compounds by - GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylnaphthalene	ND	5.0	µg/L	1		EPA 625	2/13/18	2/14/18 12:14	BGL
Phenanthrene	ND	5.0	µg/L	1		EPA 625	2/13/18	2/14/18 12:14	BGL
2-Methylphenol	ND	10	µg/L	1		EPA 625	2/13/18	2/14/18 12:14	BGL
Phenol	ND	10	µg/L	1		EPA 625	2/13/18	2/14/18 12:14	BGL
3/4-Methylphenol	ND	10	µg/L	1		EPA 625	2/13/18	2/14/18 12:14	BGL
Pyrene	ND	5.0	µg/L	1		EPA 625	2/13/18	2/14/18 12:14	BGL
1,2,4-Trichlorobenzene	ND	5.0	µg/L	1		EPA 625	2/13/18	2/14/18 12:14	BGL
2,4,6-Trichlorophenol	ND	10	µg/L	1		EPA 625	2/13/18	2/14/18 12:14	BGL
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
2-Fluorophenol	22.9	15-110						2/14/18 12:14	
Phenol-d6	16.7	15-110						2/14/18 12:14	
Nitrobenzene-d5	44.0	30-130						2/14/18 12:14	
2-Fluorobiphenyl	47.0	30-130						2/14/18 12:14	
2,4,6-Tribromophenol	51.6	15-110						2/14/18 12:14	
p-Terphenyl-d14	49.2	30-130						2/14/18 12:14	

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Project Location: South Boston, MA

Sample Description:

Work Order: 18B0433

Date Received: 2/13/2018

Field Sample #: LE-TMW3

Sampled: 2/13/2018 10:00

Sample ID: 18B0433-02

Sample Matrix: Ground Water

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.10	0.057	µg/L	1		EPA 608	2/14/18	2/14/18 11:14	KAL
Aroclor-1221 [1]	ND	0.10	0.062	µg/L	1		EPA 608	2/14/18	2/14/18 11:14	KAL
Aroclor-1232 [1]	ND	0.10	0.038	µg/L	1		EPA 608	2/14/18	2/14/18 11:14	KAL
Aroclor-1242 [1]	ND	0.10	0.054	µg/L	1		EPA 608	2/14/18	2/14/18 11:14	KAL
Aroclor-1248 [1]	ND	0.10	0.064	µg/L	1		EPA 608	2/14/18	2/14/18 11:14	KAL
Aroclor-1254 [1]	ND	0.10	0.071	µg/L	1		EPA 608	2/14/18	2/14/18 11:14	KAL
Aroclor-1260 [1]	ND	0.10	0.073	µg/L	1		EPA 608	2/14/18	2/14/18 11:14	KAL
Surrogates	% Recovery		Recovery Limits		Flag/Qual					
Decachlorobiphenyl [1]	43.2		30-150				2/14/18 11:14			
Decachlorobiphenyl [2]	53.4		30-150				2/14/18 11:14			
Tetrachloro-m-xylene [1]	81.0		30-150				2/14/18 11:14			
Tetrachloro-m-xylene [2]	87.7		30-150				2/14/18 11:14			

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Project Location: South Boston, MA

Sample Description:

Work Order: 18B0433

Date Received: 2/13/2018

Field Sample #: LE-TMW3

Sampled: 2/13/2018 10:00

Sample ID: 18B0433-02

Sample Matrix: Ground Water

Petrolium Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	2/14/18	2/14/18 19:03	RMW
C19-C36 Aliphatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	2/14/18	2/14/18 19:03	RMW
Unadjusted C11-C22 Aromatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	2/14/18	2/14/18 19:03	RMW
C11-C22 Aromatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	2/14/18	2/14/18 19:03	RMW
Acenaphthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	2/14/18	2/14/18 19:03	RMW
Acenaphthylene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	2/14/18	2/14/18 19:03	RMW
Anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	2/14/18	2/14/18 19:03	RMW
Benzo(a)anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	2/14/18	2/14/18 19:03	RMW
Benzo(a)pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	2/14/18	2/14/18 19:03	RMW
Benzo(b)fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	2/14/18	2/14/18 19:03	RMW
Benzo(g,h,i)perylene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	2/14/18	2/14/18 19:03	RMW
Benzo(k)fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	2/14/18	2/14/18 19:03	RMW
Chrysene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	2/14/18	2/14/18 19:03	RMW
Dibenz(a,h)anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	2/14/18	2/14/18 19:03	RMW
Fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	2/14/18	2/14/18 19:03	RMW
Fluorene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	2/14/18	2/14/18 19:03	RMW
Indeno(1,2,3-cd)pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	2/14/18	2/14/18 19:03	RMW
2-Methylnaphthalene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	2/14/18	2/14/18 19:03	RMW
Naphthalene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	2/14/18	2/14/18 19:03	RMW
Phenanthrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	2/14/18	2/14/18 19:03	RMW
Pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	2/14/18	2/14/18 19:03	RMW
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
Chlorooctadecane (COD)	89.0	40-140							
o-Terphenyl (OTP)	85.1	40-140							
2-Bromonaphthalene	91.8	40-140							
2-Fluorobiphenyl	90.3	40-140							

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Project Location: South Boston, MA

Sample Description:

Work Order: 18B0433

Date Received: 2/13/2018

Field Sample #: LE-TMW3

Sampled: 2/13/2018 10:00

Sample ID: 18B0433-02

Sample Matrix: Ground Water

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	5.0		µg/L	5	DL-15	EPA 200.8	2/14/18	2/15/18 8:43	MJH
Arsenic	7.7	5.0		µg/L	5	DL-15	EPA 200.8	2/14/18	2/15/18 8:43	MJH
Cadmium	ND	1.0		µg/L	5	DL-15	EPA 200.8	2/14/18	2/15/18 8:43	MJH
Chromium	ND	50		µg/L	5	DL-15	EPA 200.8	2/14/18	2/15/18 8:43	MJH
Chromium, Trivalent	0.0			mg/L	1		Tri Chrome Calc.	2/14/18	2/15/18 9:54	MJH
Copper	27	5.0		µg/L	5	DL-15	EPA 200.8	2/14/18	2/15/18 8:43	MJH
Iron	0.41	0.050		mg/L	1		EPA 200.7	2/14/18	2/15/18 13:02	QNW
Lead	ND	2.5		µg/L	5	DL-15	EPA 200.8	2/14/18	2/15/18 8:43	MJH
Mercury	ND	0.00010		mg/L	1		EPA 245.1	2/14/18	2/15/18 9:12	EJB
Nickel	ND	25		µg/L	5	DL-15	EPA 200.8	2/14/18	2/15/18 8:43	MJH
Selenium	21	25	11	µg/L	5	Ja, DL-15	EPA 200.8	2/14/18	2/15/18 8:43	MJH
Silver	ND	1.0		µg/L	5	DL-15	EPA 200.8	2/14/18	2/15/18 8:43	MJH
Zinc	ND	100		µg/L	5	DL-15	EPA 200.8	2/14/18	2/15/18 8:43	MJH

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Project Location: South Boston, MA

Sample Description:

Work Order: 18B0433

Date Received: 2/13/2018

Field Sample #: LE-TMW3

Sampled: 2/13/2018 10:00

Sample ID: 18B0433-02

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Chlorine, Residual	ND	0.020		mg/L	1	Z-01	SM21-22 4500 CL G	2/13/18	2/13/18 21:00	LL
Hexavalent Chromium	ND	0.0040		mg/L	1		SM21-22 3500 Cr B	2/13/18	2/13/18 23:24	LL
Total Suspended Solids	53	5.0		mg/L	1		SM21-22 2540D	2/15/18	2/15/18 8:45	LL
Silica Gel Treated HEM (SGT-HEM)	ND	1.5		mg/L	1		EPA 1664B	2/15/18	2/15/18 10:30	LL

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Project Location: South Boston, MA

Sample Description:

Work Order: 18B0433

Date Received: 2/13/2018

Field Sample #: LE-TMW3

Sampled: 2/13/2018 10:00

Sample ID: 18B0433-02

Sample Matrix: Ground Water

Drinking Water Organics EPA 504.1

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
1,2-Dibromoethane (EDB) (1)	ND	0.020	µg/L	1		EPA 504.1	2/14/18	2/14/18 11:32	JMB
Surrogates	% Recovery	Recovery Limits			Flag/Qual				
1,3-Dibromopropane (1)	84.3	70-130						2/14/18 11:32	

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Project Location: South Boston, MA

Sample Description:

Work Order: 18B0433

Date Received: 2/13/2018

Field Sample #: LE-TMW3

Sampled: 2/13/2018 10:00

Sample ID: 18B0433-02

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Ammonia as N	0.278	0.075	0.024	mg/L	1		SM19-22 4500 NH3 C	2/15/18	0:00	ALPHA
Cyanide	0.003	0.005	0.001	mg/L	1	J	SM21-22 4500 CN E	2/15/18	0:00	ALPHA

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Project Location: South Boston, MA

Sample Description:

Work Order: 18B0433

Date Received: 2/13/2018

Field Sample #: LE-TMW3

Sampled: 2/13/2018 10:00

Sample ID: 18B0433-02

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Chloride	4920	100	9.94	mg/L	100		EPA 300.0		2/15/18 0:00	EUROF

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Project Location: South Boston, MA

Sample Description:

Work Order: 18B0433

Date Received: 2/13/2018

Field Sample #: LE-TMW3

Sampled: 2/13/2018 10:00

Sample ID: 18B0433-02

Sample Matrix: Ground Water

Semivolatile Organic Compounds by GC

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Ethanol	ND	2000	500	ug/L	1		SW-846 8015C		2/15/18 0:00	TA NA

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Sample Extraction Data**EPA 1664B**

Lab Number [Field ID]	Batch	Initial [mL]	Date
18B0433-02 [LE-TMW3]	B196908	950	02/15/18

Prep Method: EPA 200.7-EPA 200.7

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
18B0433-02 [LE-TMW3]	B196821	50.0	50.0	02/14/18

Prep Method: EPA 200.8-EPA 200.8

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
18B0433-02 [LE-TMW3]	B196822	50.0	50.0	02/14/18

Prep Method: EPA 245.1-EPA 245.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
18B0433-02 [LE-TMW3]	B196827	6.00	6.00	02/14/18

Prep Method: EPA 504 water-EPA 504.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
18B0433-02 [LE-TMW3]	B196834	34.9	35.0	02/14/18

Prep Method: SW-846 3510C-EPA 608

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
18B0433-02 [LE-TMW3]	B196794	1000	5.00	02/14/18

Prep Method: SW-846 5030B-EPA 624

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
18B0433-02 [LE-TMW3]	B196770	5	5.00	02/14/18

Prep Method: SW-846 3510C-EPA 625

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
18B0433-02 [LE-TMW3]	B196705	1000	1.00	02/13/18

Prep Method: SW-846 3510C-MADEP-EPH-04-1.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
18B0433-02 [LE-TMW3]	B196793	1000	2.00	02/14/18

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Sample Extraction Data**Prep Method: % Solids-SM 2540G**

Lab Number [Field ID]	Batch	Date
18B0433-01 [LE-WC26]	B196792	02/13/18

SM21-22 2510B Modified

Lab Number [Field ID]	Batch	Initial [g]	Date
18B0433-01 [LE-WC26]	B196838	1.00	02/14/18

SM21-22 2540D

Lab Number [Field ID]	Batch	Initial [mL]	Date
18B0433-02 [LE-TMW3]	B196911	100	02/15/18

SM21-22 3500 Cr B

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
18B0433-02 [LE-TMW3]	B196804	50.0	50.0	02/13/18

SM21-22 4500 CL G

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
18B0433-02 [LE-TMW3]	B196805	100	100	02/13/18

SW-846 1030

Lab Number [Field ID]	Batch	Initial [g]	Date
18B0433-01 [LE-WC26]	B196950	50.0	02/14/18

Prep Method: SW-846 3051-SW-846 6010C-D

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18B0433-01 [LE-WC26]	B196818	1.51	50.0	02/14/18

Prep Method: SW-846 7471-SW-846 7471B

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18B0433-01 [LE-WC26]	B196773	0.593	50.0	02/14/18

Prep Method: SW-846 3546-SW-846 8082A

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18B0433-01 [LE-WC26]	B196707	10.0	10.0	02/13/18

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Sample Extraction Data**Prep Method: SW-846 3546-SW-846 8100 Modified**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18B0433-01 [LE-WC26]	B196790	30.0	1.00	02/13/18

Prep Method: SW-846 5035-SW-846 8260C

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18B0433-01 [LE-WC26]	B196829	4.05	10.0	02/14/18

Prep Method: SW-846 3546-SW-846 8270D

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18B0433-01 [LE-WC26]	B196704	30.0	1.00	02/13/18

Prep Method: SW-846 3510C-SW-846 8270D

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
18B0433-02 [LE-TMW3]	B196787	1000	1.00	02/13/18

SW-846 9014

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18B0433-01 [LE-WC26]	B196885	25.5	250	02/14/18

SW-846 9030A

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18B0433-01 [LE-WC26]	B196886	25.5	250	02/14/18

SW-846 9045C

Lab Number [Field ID]	Batch	Initial [g]	Date
18B0433-01 [LE-WC26]	B196802	20.0	02/13/18

Prep Method: SW-846 3005A-Tri Chrome Calc.

Lab Number [Field ID]	Batch	Initial [mL]	Date
18B0433-02 [LE-TMW3]	B196823	1.00	02/14/18

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QUALITY CONTROL
Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B196829 - SW-846 5035										
Blank (B196829-BLK1)				Prepared & Analyzed: 02/14/18						
Acetone	ND	0.10	mg/Kg wet							
tert-Amyl Methyl Ether (TAME)	ND	0.0010	mg/Kg wet							
Benzene	ND	0.0020	mg/Kg wet							
Bromobenzene	ND	0.0020	mg/Kg wet							
Bromochloromethane	ND	0.0020	mg/Kg wet							
Bromodichloromethane	ND	0.0020	mg/Kg wet							
Bromoform	ND	0.0020	mg/Kg wet							
Bromomethane	ND	0.010	mg/Kg wet							R-05, V-34
2-Butanone (MEK)	ND	0.040	mg/Kg wet							
n-Butylbenzene	ND	0.0020	mg/Kg wet							
sec-Butylbenzene	ND	0.0020	mg/Kg wet							
tert-Butylbenzene	ND	0.0020	mg/Kg wet							
tert-Butyl Ethyl Ether (TBEE)	ND	0.0010	mg/Kg wet							
Carbon Disulfide	ND	0.0060	mg/Kg wet							
Carbon Tetrachloride	ND	0.0020	mg/Kg wet							
Chlorobenzene	ND	0.0020	mg/Kg wet							
Chlorodibromomethane	ND	0.0010	mg/Kg wet							
Chloroethane	ND	0.010	mg/Kg wet							
Chloroform	ND	0.0040	mg/Kg wet							
Chloromethane	ND	0.010	mg/Kg wet							
2-Chlorotoluene	ND	0.0020	mg/Kg wet							
4-Chlorotoluene	ND	0.0020	mg/Kg wet							
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0020	mg/Kg wet							
1,2-Dibromoethane (EDB)	ND	0.0010	mg/Kg wet							
Dibromomethane	ND	0.0020	mg/Kg wet							
1,2-Dichlorobenzene	ND	0.0020	mg/Kg wet							
1,3-Dichlorobenzene	ND	0.0020	mg/Kg wet							
1,4-Dichlorobenzene	ND	0.0020	mg/Kg wet							
Dichlorodifluoromethane (Freon 12)	ND	0.010	mg/Kg wet							V-05
1,1-Dichloroethane	ND	0.0020	mg/Kg wet							
1,2-Dichloroethane	ND	0.0020	mg/Kg wet							
1,1-Dichloroethylene	ND	0.0040	mg/Kg wet							
cis-1,2-Dichloroethylene	ND	0.0020	mg/Kg wet							
trans-1,2-Dichloroethylene	ND	0.0020	mg/Kg wet							
1,2-Dichloropropane	ND	0.0020	mg/Kg wet							
1,3-Dichloropropane	ND	0.0010	mg/Kg wet							
2,2-Dichloropropane	ND	0.0020	mg/Kg wet							V-05, L-04
1,1-Dichloropropene	ND	0.0020	mg/Kg wet							
cis-1,3-Dichloropropene	ND	0.0010	mg/Kg wet							
trans-1,3-Dichloropropene	ND	0.0010	mg/Kg wet							
Diethyl Ether	ND	0.010	mg/Kg wet							
Diisopropyl Ether (DIPE)	ND	0.0010	mg/Kg wet							
1,4-Dioxane	ND	0.10	mg/Kg wet							V-16
Ethylbenzene	ND	0.0020	mg/Kg wet							
Hexachlorobutadiene	ND	0.0020	mg/Kg wet							
2-Hexanone (MBK)	ND	0.020	mg/Kg wet							
Isopropylbenzene (Cumene)	ND	0.0020	mg/Kg wet							
p-Isopropyltoluene (p-Cymene)	ND	0.0020	mg/Kg wet							
Methyl tert-Butyl Ether (MTBE)	ND	0.0040	mg/Kg wet							
Methylene Chloride	ND	0.010	mg/Kg wet							
4-Methyl-2-pentanone (MIBK)	ND	0.020	mg/Kg wet							
Naphthalene	ND	0.0040	mg/Kg wet							

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B196829 - SW-846 5035										
Blank (B196829-BLK1)										
Prepared & Analyzed: 02/14/18										
n-Propylbenzene	ND	0.0020	mg/Kg wet							
Styrene	ND	0.0020	mg/Kg wet							
1,1,1,2-Tetrachloroethane	ND	0.0020	mg/Kg wet							
1,1,2,2-Tetrachloroethane	ND	0.0010	mg/Kg wet							
Tetrachloroethylene	ND	0.0020	mg/Kg wet							
Tetrahydrofuran	ND	0.010	mg/Kg wet							
Toluene	ND	0.0020	mg/Kg wet							
1,2,3-Trichlorobenzene	ND	0.0020	mg/Kg wet							
1,2,4-Trichlorobenzene	ND	0.0020	mg/Kg wet							
1,1,1-Trichloroethane	ND	0.0020	mg/Kg wet							
1,1,2-Trichloroethane	ND	0.0020	mg/Kg wet							
Trichloroethylene	ND	0.0020	mg/Kg wet							
Trichlorofluoromethane (Freon 11)	ND	0.010	mg/Kg wet							
1,2,3-Trichloropropane	ND	0.0020	mg/Kg wet							
1,2,4-Trimethylbenzene	ND	0.0020	mg/Kg wet							
1,3,5-Trimethylbenzene	ND	0.0020	mg/Kg wet							
Vinyl Chloride	ND	0.010	mg/Kg wet							
m+p Xylene	ND	0.0040	mg/Kg wet							
o-Xylene	ND	0.0020	mg/Kg wet							
Surrogate: 1,2-Dichloroethane-d4	0.0447		mg/Kg wet	0.0500		89.4	70-130			
Surrogate: Toluene-d8	0.0559		mg/Kg wet	0.0500		112	70-130			
Surrogate: 4-Bromofluorobenzene	0.0526		mg/Kg wet	0.0500		105	70-130			
LCS (B196829-BS1)										
Prepared & Analyzed: 02/14/18										
Acetone	0.178	0.10	mg/Kg wet	0.200		88.8	40-160			†
tert-Amyl Methyl Ether (TAME)	0.0146	0.0010	mg/Kg wet	0.0200		73.1	70-130			
Benzene	0.0189	0.0020	mg/Kg wet	0.0200		94.3	70-130			
Bromobenzene	0.0216	0.0020	mg/Kg wet	0.0200		108	70-130			
Bromochloromethane	0.0208	0.0020	mg/Kg wet	0.0200		104	70-130			
Bromodichloromethane	0.0182	0.0020	mg/Kg wet	0.0200		90.9	70-130			
Bromoform	0.0203	0.0020	mg/Kg wet	0.0200		102	70-130			
Bromomethane	0.0112	0.010	mg/Kg wet	0.0200		56.1	40-160		L-14, R-05, V-34	†
2-Butanone (MEK)	0.156	0.040	mg/Kg wet	0.200		77.8	40-160			†
n-Butylbenzene	0.0229	0.0020	mg/Kg wet	0.0200		114	70-130			
sec-Butylbenzene	0.0204	0.0020	mg/Kg wet	0.0200		102	70-130			
tert-Butylbenzene	0.0188	0.0020	mg/Kg wet	0.0200		94.1	70-130			
tert-Butyl Ethyl Ether (TBEE)	0.0145	0.0010	mg/Kg wet	0.0200		72.5	70-130			
Carbon Disulfide	0.0175	0.0060	mg/Kg wet	0.0200		87.4	70-130			
Carbon Tetrachloride	0.0148	0.0020	mg/Kg wet	0.0200		73.8	70-130			
Chlorobenzene	0.0215	0.0020	mg/Kg wet	0.0200		108	70-130			
Chlorodibromomethane	0.0185	0.0010	mg/Kg wet	0.0200		92.3	70-130			
Chloroethane	0.0158	0.010	mg/Kg wet	0.0200		79.1	70-130			
Chloroform	0.0187	0.0040	mg/Kg wet	0.0200		93.5	70-130			
Chloromethane	0.0147	0.010	mg/Kg wet	0.0200		73.3	40-160			†
2-Chlorotoluene	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130			
4-Chlorotoluene	0.0206	0.0020	mg/Kg wet	0.0200		103	70-130			
1,2-Dibromo-3-chloropropane (DBCP)	0.0183	0.0020	mg/Kg wet	0.0200		91.5	70-130			
1,2-Dibromoethane (EDB)	0.0197	0.0010	mg/Kg wet	0.0200		98.6	70-130			
Dibromomethane	0.0199	0.0020	mg/Kg wet	0.0200		99.5	70-130			
1,2-Dichlorobenzene	0.0214	0.0020	mg/Kg wet	0.0200		107	70-130			
1,3-Dichlorobenzene	0.0220	0.0020	mg/Kg wet	0.0200		110	70-130			
1,4-Dichlorobenzene	0.0211	0.0020	mg/Kg wet	0.0200		106	70-130			

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B196829 - SW-846 5035										
LCS (B196829-BS1)				Prepared & Analyzed: 02/14/18						
Dichlorodifluoromethane (Freon 12)	0.00888	0.010	mg/Kg wet	0.0200		44.4	40-160			L-14, V-05 †
1,1-Dichloroethane	0.0203	0.0020	mg/Kg wet	0.0200		102	70-130			
1,2-Dichloroethane	0.0183	0.0020	mg/Kg wet	0.0200		91.4	70-130			
1,1-Dichloroethylene	0.0180	0.0040	mg/Kg wet	0.0200		90.2	70-130			
cis-1,2-Dichloroethylene	0.0185	0.0020	mg/Kg wet	0.0200		92.6	70-130			
trans-1,2-Dichloroethylene	0.0189	0.0020	mg/Kg wet	0.0200		94.3	70-130			
1,2-Dichloropropane	0.0199	0.0020	mg/Kg wet	0.0200		99.5	70-130			
1,3-Dichloropropane	0.0193	0.0010	mg/Kg wet	0.0200		96.6	70-130			
2,2-Dichloropropane	0.0106	0.0020	mg/Kg wet	0.0200		53.2	* 70-130			L-04, V-05
1,1-Dichloropropene	0.0174	0.0020	mg/Kg wet	0.0200		86.9	70-130			
cis-1,3-Dichloropropene	0.0165	0.0010	mg/Kg wet	0.0200		82.5	70-130			
trans-1,3-Dichloropropene	0.0157	0.0010	mg/Kg wet	0.0200		78.7	70-130			
Diethyl Ether	0.0173	0.010	mg/Kg wet	0.0200		86.4	70-130			
Diisopropyl Ether (DIPE)	0.0179	0.0010	mg/Kg wet	0.0200		89.6	70-130			
1,4-Dioxane	0.208	0.10	mg/Kg wet	0.200		104	40-160			V-16 †
Ethylbenzene	0.0203	0.0020	mg/Kg wet	0.0200		101	70-130			
Hexachlorobutadiene	0.0203	0.0020	mg/Kg wet	0.0200		102	70-130			
2-Hexanone (MBK)	0.195	0.020	mg/Kg wet	0.200		97.3	40-160			†
Isopropylbenzene (Cumene)	0.0218	0.0020	mg/Kg wet	0.0200		109	70-130			
p-Isopropyltoluene (p-Cymene)	0.0205	0.0020	mg/Kg wet	0.0200		102	70-130			
Methyl tert-Butyl Ether (MTBE)	0.0143	0.0040	mg/Kg wet	0.0200		71.4	70-130			
Methylene Chloride	0.0183	0.010	mg/Kg wet	0.0200		91.5	70-130			
4-Methyl-2-pentanone (MIBK)	0.187	0.020	mg/Kg wet	0.200		93.5	40-160			†
Naphthalene	0.0182	0.0040	mg/Kg wet	0.0200		90.8	70-130			
n-Propylbenzene	0.0212	0.0020	mg/Kg wet	0.0200		106	70-130			
Styrene	0.0217	0.0020	mg/Kg wet	0.0200		108	70-130			
1,1,1,2-Tetrachloroethane	0.0199	0.0020	mg/Kg wet	0.0200		99.4	70-130			
1,1,1,2,2-Tetrachloroethane	0.0222	0.0010	mg/Kg wet	0.0200		111	70-130			V-20
Tetrachloroethylene	0.0201	0.0020	mg/Kg wet	0.0200		101	70-130			
Tetrahydrofuran	0.0188	0.010	mg/Kg wet	0.0200		94.1	70-130			
Toluene	0.0194	0.0020	mg/Kg wet	0.0200		96.9	70-130			
1,2,3-Trichlorobenzene	0.0183	0.0020	mg/Kg wet	0.0200		91.3	70-130			
1,2,4-Trichlorobenzene	0.0193	0.0020	mg/Kg wet	0.0200		96.5	70-130			
1,1,1-Trichloroethane	0.0163	0.0020	mg/Kg wet	0.0200		81.7	70-130			
1,1,2-Trichloroethane	0.0195	0.0020	mg/Kg wet	0.0200		97.5	70-130			
Trichloroethylene	0.0191	0.0020	mg/Kg wet	0.0200		95.7	70-130			
Trichlorofluoromethane (Freon 11)	0.0161	0.010	mg/Kg wet	0.0200		80.4	70-130			
1,2,3-Trichloropropane	0.0201	0.0020	mg/Kg wet	0.0200		100	70-130			V-20
1,2,4-Trimethylbenzene	0.0190	0.0020	mg/Kg wet	0.0200		95.0	70-130			
1,3,5-Trimethylbenzene	0.0209	0.0020	mg/Kg wet	0.0200		105	70-130			
Vinyl Chloride	0.0153	0.010	mg/Kg wet	0.0200		76.5	70-130			
m+p Xylene	0.0404	0.0040	mg/Kg wet	0.0400		101	70-130			
o-Xylene	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0491		mg/Kg wet	0.0500		98.1	70-130			
Surrogate: Toluene-d8	0.0552		mg/Kg wet	0.0500		110	70-130			
Surrogate: 4-Bromofluorobenzene	0.0550		mg/Kg wet	0.0500		110	70-130			

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B196829 - SW-846 5035										
LCS Dup (B196829-BSD1)				Prepared & Analyzed: 02/14/18						
Acetone	0.196	0.10	mg/Kg wet	0.200		98.2	40-160	10.0	20	†
tert-Amyl Methyl Ether (TAME)	0.0160	0.0010	mg/Kg wet	0.0200		80.2	70-130	9.26	20	
Benzene	0.0200	0.0020	mg/Kg wet	0.0200		100	70-130	5.87	20	
Bromobenzene	0.0216	0.0020	mg/Kg wet	0.0200		108	70-130	0.370	20	
Bromochloromethane	0.0227	0.0020	mg/Kg wet	0.0200		114	70-130	8.92	20	
Bromodichloromethane	0.0191	0.0020	mg/Kg wet	0.0200		95.6	70-130	5.04	20	
Bromoform	0.0210	0.0020	mg/Kg wet	0.0200		105	70-130	3.10	20	
Bromomethane	0.0156	0.010	mg/Kg wet	0.0200		78.2	40-160	32.9 *	20	R-05, V-34 †
2-Butanone (MEK)	0.172	0.040	mg/Kg wet	0.200		86.2	40-160	10.3	20	†
n-Butylbenzene	0.0231	0.0020	mg/Kg wet	0.0200		115	70-130	0.958	20	
sec-Butylbenzene	0.0203	0.0020	mg/Kg wet	0.0200		102	70-130	0.393	20	
tert-Butylbenzene	0.0188	0.0020	mg/Kg wet	0.0200		94.1	70-130	0.00	20	
tert-Butyl Ethyl Ether (TBEE)	0.0153	0.0010	mg/Kg wet	0.0200		76.7	70-130	5.63	20	
Carbon Disulfide	0.0188	0.0060	mg/Kg wet	0.0200		94.2	70-130	7.49	20	
Carbon Tetrachloride	0.0155	0.0020	mg/Kg wet	0.0200		77.5	70-130	4.89	20	
Chlorobenzene	0.0224	0.0020	mg/Kg wet	0.0200		112	70-130	4.01	20	
Chlorodibromomethane	0.0197	0.0010	mg/Kg wet	0.0200		98.7	70-130	6.70	20	
Chloroethane	0.0166	0.010	mg/Kg wet	0.0200		83.0	70-130	4.81	20	
Chloroform	0.0194	0.0040	mg/Kg wet	0.0200		97.2	70-130	3.88	20	
Chloromethane	0.0163	0.010	mg/Kg wet	0.0200		81.6	40-160	10.7	20	†
2-Chlorotoluene	0.0204	0.0020	mg/Kg wet	0.0200		102	70-130	1.28	20	
4-Chlorotoluene	0.0213	0.0020	mg/Kg wet	0.0200		107	70-130	3.33	20	
1,2-Dibromo-3-chloropropane (DBCP)	0.0190	0.0020	mg/Kg wet	0.0200		95.0	70-130	3.75	20	
1,2-Dibromoethane (EDB)	0.0209	0.0010	mg/Kg wet	0.0200		104	70-130	5.71	20	
Dibromomethane	0.0201	0.0020	mg/Kg wet	0.0200		101	70-130	1.20	20	
1,2-Dichlorobenzene	0.0207	0.0020	mg/Kg wet	0.0200		103	70-130	3.61	20	
1,3-Dichlorobenzene	0.0221	0.0020	mg/Kg wet	0.0200		111	70-130	0.634	20	
1,4-Dichlorobenzene	0.0204	0.0020	mg/Kg wet	0.0200		102	70-130	3.57	20	
Dichlorodifluoromethane (Freon 12)	0.00912	0.010	mg/Kg wet	0.0200		45.6	40-160	2.67	20	L-14, V-05 †
1,1-Dichloroethane	0.0218	0.0020	mg/Kg wet	0.0200		109	70-130	7.12	20	
1,2-Dichloroethane	0.0195	0.0020	mg/Kg wet	0.0200		97.6	70-130	6.56	20	
1,1-Dichloroethylene	0.0196	0.0040	mg/Kg wet	0.0200		97.8	70-130	8.09	20	
cis-1,2-Dichloroethylene	0.0194	0.0020	mg/Kg wet	0.0200		96.8	70-130	4.44	20	
trans-1,2-Dichloroethylene	0.0203	0.0020	mg/Kg wet	0.0200		102	70-130	7.35	20	
1,2-Dichloropropane	0.0219	0.0020	mg/Kg wet	0.0200		110	70-130	9.66	20	
1,3-Dichloropropane	0.0200	0.0010	mg/Kg wet	0.0200		100	70-130	3.46	20	
2,2-Dichloropropane	0.0111	0.0020	mg/Kg wet	0.0200		55.3 *	70-130	3.87	20	V-05, L-04
1,1-Dichloropropene	0.0188	0.0020	mg/Kg wet	0.0200		94.2	70-130	8.06	20	
cis-1,3-Dichloropropene	0.0174	0.0010	mg/Kg wet	0.0200		87.2	70-130	5.54	20	
trans-1,3-Dichloropropene	0.0158	0.0010	mg/Kg wet	0.0200		78.8	70-130	0.127	20	
Diethyl Ether	0.0187	0.010	mg/Kg wet	0.0200		93.5	70-130	7.89	20	
Diisopropyl Ether (DIPE)	0.0192	0.0010	mg/Kg wet	0.0200		95.9	70-130	6.79	20	
1,4-Dioxane	0.233	0.10	mg/Kg wet	0.200		116	40-160	11.2	20	V-16 †
Ethylbenzene	0.0213	0.0020	mg/Kg wet	0.0200		107	70-130	5.19	20	
Hexachlorobutadiene	0.0200	0.0020	mg/Kg wet	0.0200		99.9	70-130	1.69	20	
2-Hexanone (MBK)	0.206	0.020	mg/Kg wet	0.200		103	40-160	5.75	20	†
Isopropylbenzene (Cumene)	0.0224	0.0020	mg/Kg wet	0.0200		112	70-130	2.53	20	
p-Isopropyltoluene (p-Cymene)	0.0205	0.0020	mg/Kg wet	0.0200		103	70-130	0.293	20	
Methyl tert-Butyl Ether (MTBE)	0.0157	0.0040	mg/Kg wet	0.0200		78.5	70-130	9.47	20	
Methylene Chloride	0.0198	0.010	mg/Kg wet	0.0200		99.0	70-130	7.87	20	
4-Methyl-2-pentanone (MIBK)	0.195	0.020	mg/Kg wet	0.200		97.5	40-160	4.19	20	†
Naphthalene	0.0177	0.0040	mg/Kg wet	0.0200		88.3	70-130	2.79	20	

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B196829 - SW-846 5035										
LCS Dup (B196829-BSD1)				Prepared & Analyzed: 02/14/18						
n-Propylbenzene	0.0218	0.0020	mg/Kg wet	0.0200		109	70-130	3.07	20	
Styrene	0.0225	0.0020	mg/Kg wet	0.0200		113	70-130	3.98	20	
1,1,1,2-Tetrachloroethane	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130	1.40	20	
1,1,2,2-Tetrachloroethane	0.0227	0.0010	mg/Kg wet	0.0200		114	70-130	2.23	20	V-20
Tetrachloroethylene	0.0215	0.0020	mg/Kg wet	0.0200		108	70-130	6.63	20	
Tetrahydrofuran	0.0200	0.010	mg/Kg wet	0.0200		100	70-130	6.18	20	
Toluene	0.0205	0.0020	mg/Kg wet	0.0200		103	70-130	5.81	20	
1,2,3-Trichlorobenzene	0.0177	0.0020	mg/Kg wet	0.0200		88.7	70-130	2.89	20	
1,2,4-Trichlorobenzene	0.0188	0.0020	mg/Kg wet	0.0200		94.0	70-130	2.62	20	
1,1,1-Trichloroethane	0.0173	0.0020	mg/Kg wet	0.0200		86.7	70-130	5.94	20	
1,1,2-Trichloroethane	0.0205	0.0020	mg/Kg wet	0.0200		103	70-130	5.19	20	
Trichloroethylene	0.0198	0.0020	mg/Kg wet	0.0200		99.0	70-130	3.39	20	
Trichlorofluoromethane (Freon 11)	0.0168	0.010	mg/Kg wet	0.0200		84.2	70-130	4.62	20	
1,2,3-Trichloropropane	0.0213	0.0020	mg/Kg wet	0.0200		107	70-130	5.98	20	V-20
1,2,4-Trimethylbenzene	0.0192	0.0020	mg/Kg wet	0.0200		95.9	70-130	0.943	20	
1,3,5-Trimethylbenzene	0.0215	0.0020	mg/Kg wet	0.0200		107	70-130	2.45	20	
Vinyl Chloride	0.0167	0.010	mg/Kg wet	0.0200		83.6	70-130	8.87	20	
m+p Xylene	0.0423	0.0040	mg/Kg wet	0.0400		106	70-130	4.69	20	
o-Xylene	0.0207	0.0020	mg/Kg wet	0.0200		104	70-130	2.74	20	
Surrogate: 1,2-Dichloroethane-d4	0.0495		mg/Kg wet	0.0500		99.0	70-130			
Surrogate: Toluene-d8	0.0560		mg/Kg wet	0.0500		112	70-130			
Surrogate: 4-Bromofluorobenzene	0.0554		mg/Kg wet	0.0500		111	70-130			

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QUALITY CONTROL
Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B196770 - SW-846 5030B
Blank (B196770-BLK1)

Prepared: 02/13/18 Analyzed: 02/14/18

Acetone	ND	50	µg/L							
tert-Amyl Methyl Ether (TAME)	ND	0.50	µg/L							
Benzene	ND	1.0	µg/L							
tert-Butyl Alcohol (TBA)	ND	20	µg/L							
Carbon Tetrachloride	ND	2.0	µg/L							
1,2-Dichlorobenzene	ND	2.0	µg/L							
1,3-Dichlorobenzene	ND	2.0	µg/L							
1,4-Dichlorobenzene	ND	2.0	µg/L							
1,2-Dichloroethane	ND	2.0	µg/L							
cis-1,2-Dichloroethylene	ND	1.0	µg/L							
1,1-Dichloroethane	ND	2.0	µg/L							
1,1-Dichloroethylene	ND	2.0	µg/L							
1,4-Dioxane	ND	50	µg/L							
Ethylbenzene	ND	2.0	µg/L							
Methyl tert-Butyl Ether (MTBE)	ND	2.0	µg/L							
Methylene Chloride	ND	5.0	µg/L							
Tetrachloroethylene	ND	2.0	µg/L							
Toluene	ND	1.0	µg/L							
1,1,1-Trichloroethane	ND	2.0	µg/L							
1,1,2-Trichloroethane	ND	2.0	µg/L							
Trichloroethylene	ND	2.0	µg/L							
Vinyl Chloride	ND	2.0	µg/L							
m+p Xylene	ND	2.0	µg/L							
o-Xylene	ND	2.0	µg/L							
Surrogate: 1,2-Dichloroethane-d4	24.0		µg/L	25.0		95.8	70-130			
Surrogate: Toluene-d8	25.0		µg/L	25.0		100	70-130			
Surrogate: 4-Bromofluorobenzene	23.2		µg/L	25.0		92.6	70-130			

LCS (B196770-BS1)

Prepared: 02/13/18 Analyzed: 02/14/18

Acetone	150	50	µg/L	200		75.0	70-160			†
tert-Amyl Methyl Ether (TAME)	20.4	0.50	µg/L	20.0		102	70-130			
Benzene	20.9	1.0	µg/L	20.0		104	37-151			
tert-Butyl Alcohol (TBA)	173	20	µg/L	200		86.4	40-160			†
Carbon Tetrachloride	19.9	2.0	µg/L	20.0		99.4	70-140			
1,2-Dichlorobenzene	19.7	2.0	µg/L	20.0		98.6	18-190			
1,3-Dichlorobenzene	20.4	2.0	µg/L	20.0		102	59-156			
1,4-Dichlorobenzene	19.6	2.0	µg/L	20.0		97.9	18-190			
1,2-Dichloroethane	16.8	2.0	µg/L	20.0		84.2	49-155			
cis-1,2-Dichloroethylene	20.8	1.0	µg/L	20.0		104	70-130			
1,1-Dichloroethane	19.2	2.0	µg/L	20.0		96.1	59-155			
1,1-Dichloroethylene	17.8	2.0	µg/L	20.0		88.9	20-234			
1,4-Dioxane	198	50	µg/L	200		99.2	40-130			†
Ethylbenzene	20.5	2.0	µg/L	20.0		102	37-162			
Methyl tert-Butyl Ether (MTBE)	19.4	2.0	µg/L	20.0		97.2	70-130			
Methylene Chloride	18.6	5.0	µg/L	20.0		92.8	50-221			
Tetrachloroethylene	20.3	2.0	µg/L	20.0		102	64-148			
Toluene	19.8	1.0	µg/L	20.0		99.0	47-150			
1,1,1-Trichloroethane	20.0	2.0	µg/L	20.0		100	52-162			
1,1,2-Trichloroethane	20.4	2.0	µg/L	20.0		102	52-150			
Trichloroethylene	20.1	2.0	µg/L	20.0		100	71-157			
Vinyl Chloride	8.70	2.0	µg/L	20.0		43.5	20-251			
m+p Xylene	40.4	2.0	µg/L	40.0		101	70-130			

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QUALITY CONTROL
Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B196770 - SW-846 5030B
LCS (B196770-BS1)

Prepared: 02/13/18 Analyzed: 02/14/18

o-Xylene	19.9	2.0	µg/L	20.0		99.4	70-130			
Surrogate: 1,2-Dichloroethane-d4	24.2		µg/L	25.0		96.8	70-130			
Surrogate: Toluene-d8	24.8		µg/L	25.0		99.0	70-130			
Surrogate: 4-Bromofluorobenzene	24.0		µg/L	25.0		96.1	70-130			

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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B196704 - SW-846 3546										
Blank (B196704-BLK1)				Prepared & Analyzed: 02/13/18						
Acenaphthene	ND	0.17	mg/Kg wet							
Acenaphthylene	ND	0.17	mg/Kg wet							
Acetophenone	ND	0.34	mg/Kg wet							
Aniline	ND	0.34	mg/Kg wet							L-04, V-34
Anthracene	ND	0.17	mg/Kg wet							
Benzo(a)anthracene	ND	0.17	mg/Kg wet							
Benzo(a)pyrene	ND	0.17	mg/Kg wet							
Benzo(b)fluoranthene	ND	0.17	mg/Kg wet							
Benzo(g,h,i)perylene	ND	0.17	mg/Kg wet							V-20, R-05
Benzo(k)fluoranthene	ND	0.17	mg/Kg wet							
Bis(2-chloroethoxy)methane	ND	0.34	mg/Kg wet							
Bis(2-chloroethyl)ether	ND	0.34	mg/Kg wet							
Bis(2-chloroisopropyl)ether	ND	0.34	mg/Kg wet							
Bis(2-Ethylhexyl)phthalate	ND	0.34	mg/Kg wet							
4-Bromophenylphenylether	ND	0.34	mg/Kg wet							
Butylbenzylphthalate	ND	0.34	mg/Kg wet							R-05
4-Chloroaniline	ND	0.66	mg/Kg wet							V-34
2-Chloronaphthalene	ND	0.34	mg/Kg wet							
2-Chlorophenol	ND	0.34	mg/Kg wet							
Chrysene	ND	0.17	mg/Kg wet							
Dibenz(a,h)anthracene	ND	0.17	mg/Kg wet							
Dibenzofuran	ND	0.34	mg/Kg wet							
Di-n-butylphthalate	ND	0.34	mg/Kg wet							V-20
1,2-Dichlorobenzene	ND	0.34	mg/Kg wet							
1,3-Dichlorobenzene	ND	0.34	mg/Kg wet							
1,4-Dichlorobenzene	ND	0.34	mg/Kg wet							
3,3-Dichlorobenzidine	ND	0.17	mg/Kg wet							V-34
2,4-Dichlorophenol	ND	0.34	mg/Kg wet							
Diethylphthalate	ND	0.34	mg/Kg wet							
2,4-Dimethylphenol	ND	0.34	mg/Kg wet							
Dimethylphthalate	ND	0.34	mg/Kg wet							V-20
2,4-Dinitrophenol	ND	0.66	mg/Kg wet							V-04
2,4-Dinitrotoluene	ND	0.34	mg/Kg wet							
2,6-Dinitrotoluene	ND	0.34	mg/Kg wet							
Di-n-octylphthalate	ND	0.34	mg/Kg wet							V-20
1,2-Diphenylhydrazine (as Azobenzene)	ND	0.34	mg/Kg wet							
Fluoranthene	ND	0.17	mg/Kg wet							
Fluorene	ND	0.17	mg/Kg wet							
Hexachlorobenzene	ND	0.34	mg/Kg wet							
Hexachlorobutadiene	ND	0.34	mg/Kg wet							
Hexachloroethane	ND	0.34	mg/Kg wet							
Indeno(1,2,3-cd)pyrene	ND	0.17	mg/Kg wet							
Isophorone	ND	0.34	mg/Kg wet							
2-Methylnaphthalene	ND	0.17	mg/Kg wet							
2-Methylphenol	ND	0.34	mg/Kg wet							
3/4-Methylphenol	ND	0.34	mg/Kg wet							
Naphthalene	ND	0.17	mg/Kg wet							
Nitrobenzene	ND	0.34	mg/Kg wet							
2-Nitrophenol	ND	0.34	mg/Kg wet							
4-Nitrophenol	ND	0.66	mg/Kg wet							
Pentachlorophenol	ND	0.34	mg/Kg wet							
Phenanthrene	ND	0.17	mg/Kg wet							

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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B196704 - SW-846 3546										
Blank (B196704-BLK1)				Prepared & Analyzed: 02/13/18						
Phenol	ND	0.34	mg/Kg wet							
Pyrene	ND	0.17	mg/Kg wet							R-05
1,2,4-Trichlorobenzene	ND	0.34	mg/Kg wet							
2,4,5-Trichlorophenol	ND	0.34	mg/Kg wet							
2,4,6-Trichlorophenol	ND	0.34	mg/Kg wet							
Surrogate: 2-Fluorophenol	4.08		mg/Kg wet	6.67		61.2	30-130			
Surrogate: Phenol-d6	4.24		mg/Kg wet	6.67		63.5	30-130			
Surrogate: Nitrobenzene-d5	2.33		mg/Kg wet	3.33		70.0	30-130			
Surrogate: 2-Fluorobiphenyl	2.19		mg/Kg wet	3.33		65.7	30-130			
Surrogate: 2,4,6-Tribromophenol	3.47		mg/Kg wet	6.67		52.1	30-130			
Surrogate: p-Terphenyl-d14	3.02		mg/Kg wet	3.33		90.7	30-130			
LCS (B196704-BS1)				Prepared & Analyzed: 02/13/18						
Acenaphthene	0.944	0.17	mg/Kg wet	1.67		56.7	40-140			
Acenaphthylene	0.910	0.17	mg/Kg wet	1.67		54.6	40-140			
Acetophenone	0.887	0.34	mg/Kg wet	1.67		53.2	40-140			
Aniline	0.611	0.34	mg/Kg wet	1.67		36.6 *	40-140			V-34, L-04
Anthracene	1.01	0.17	mg/Kg wet	1.67		60.4	40-140			
Benzo(a)anthracene	0.962	0.17	mg/Kg wet	1.67		57.7	40-140			
Benzo(a)pyrene	0.994	0.17	mg/Kg wet	1.67		59.7	40-140			
Benzo(b)fluoranthene	1.10	0.17	mg/Kg wet	1.67		66.2	40-140			
Benzo(g,h,i)perylene	1.09	0.17	mg/Kg wet	1.67		65.5	40-140			V-06, R-05
Benzo(k)fluoranthene	1.19	0.17	mg/Kg wet	1.67		71.5	40-140			
Bis(2-chloroethoxy)methane	1.08	0.34	mg/Kg wet	1.67		64.5	40-140			
Bis(2-chloroethyl)ether	0.994	0.34	mg/Kg wet	1.67		59.6	40-140			
Bis(2-chloroisopropyl)ether	0.983	0.34	mg/Kg wet	1.67		59.0	40-140			
Bis(2-Ethylhexyl)phthalate	0.991	0.34	mg/Kg wet	1.67		59.5	40-140			
4-Bromophenylphenylether	1.02	0.34	mg/Kg wet	1.67		61.2	40-140			
Butylbenzylphthalate	0.832	0.34	mg/Kg wet	1.67		49.9	40-140			R-05
4-Chloroaniline	0.539	0.66	mg/Kg wet	1.67		32.3	15-140			V-34 †
2-Chloronaphthalene	0.864	0.34	mg/Kg wet	1.67		51.8	40-140			
2-Chlorophenol	0.937	0.34	mg/Kg wet	1.67		56.2	30-130			
Chrysene	0.932	0.17	mg/Kg wet	1.67		55.9	40-140			
Dibenz(a,h)anthracene	0.988	0.17	mg/Kg wet	1.67		59.3	40-140			
Dibenzofuran	0.955	0.34	mg/Kg wet	1.67		57.3	40-140			
Di-n-butylphthalate	1.18	0.34	mg/Kg wet	1.67		71.0	40-140			V-06
1,2-Dichlorobenzene	0.857	0.34	mg/Kg wet	1.67		51.4	40-140			
1,3-Dichlorobenzene	0.807	0.34	mg/Kg wet	1.67		48.4	40-140			
1,4-Dichlorobenzene	0.782	0.34	mg/Kg wet	1.67		46.9	40-140			
3,3-Dichlorobenzidine	0.702	0.17	mg/Kg wet	1.67		42.1	40-140			V-34
2,4-Dichlorophenol	0.898	0.34	mg/Kg wet	1.67		53.9	30-130			
Diethylphthalate	0.988	0.34	mg/Kg wet	1.67		59.3	40-140			
2,4-Dimethylphenol	1.02	0.34	mg/Kg wet	1.67		61.2	30-130			
Dimethylphthalate	0.999	0.34	mg/Kg wet	1.67		59.9	40-140			V-06
2,4-Dinitrophenol	0.261	0.66	mg/Kg wet	1.67		15.7	15-140			V-04 †
2,4-Dinitrotoluene	0.945	0.34	mg/Kg wet	1.67		56.7	40-140			
2,6-Dinitrotoluene	0.993	0.34	mg/Kg wet	1.67		59.6	40-140			
Di-n-octylphthalate	1.30	0.34	mg/Kg wet	1.67		78.1	40-140			V-06
1,2-Diphenylhydrazine (as Azobenzene)	1.11	0.34	mg/Kg wet	1.67		66.6	40-140			
Fluoranthene	1.15	0.17	mg/Kg wet	1.67		69.1	40-140			
Fluorene	0.922	0.17	mg/Kg wet	1.67		55.3	40-140			
Hexachlorobenzene	0.969	0.34	mg/Kg wet	1.67		58.2	40-140			

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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B196704 - SW-846 3546										
LCS (B196704-BS1)										
Prepared & Analyzed: 02/13/18										
Hexachlorobutadiene	0.848	0.34	mg/Kg wet	1.67		50.9	40-140			
Hexachloroethane	0.790	0.34	mg/Kg wet	1.67		47.4	40-140			
Indeno(1,2,3-cd)pyrene	1.03	0.17	mg/Kg wet	1.67		61.8	40-140			
Isophorone	1.11	0.34	mg/Kg wet	1.67		66.6	40-140			
2-Methylnaphthalene	0.923	0.17	mg/Kg wet	1.67		55.4	40-140			
2-Methylphenol	0.870	0.34	mg/Kg wet	1.67		52.2	30-130			
3/4-Methylphenol	0.913	0.34	mg/Kg wet	1.67		54.8	30-130			
Naphthalene	0.879	0.17	mg/Kg wet	1.67		52.7	40-140			
Nitrobenzene	0.914	0.34	mg/Kg wet	1.67		54.9	40-140			
2-Nitrophenol	0.980	0.34	mg/Kg wet	1.67		58.8	30-130			
4-Nitrophenol	1.11	0.66	mg/Kg wet	1.67		66.7	15-140			†
Pentachlorophenol	0.859	0.34	mg/Kg wet	1.67		51.5	30-130			
Phenanthrene	0.998	0.17	mg/Kg wet	1.67		59.9	40-140			
Phenol	0.972	0.34	mg/Kg wet	1.67		58.3	15-140			†
Pyrene	0.837	0.17	mg/Kg wet	1.67		50.2	40-140			R-05
1,2,4-Trichlorobenzene	0.888	0.34	mg/Kg wet	1.67		53.3	40-140			
2,4,5-Trichlorophenol	0.904	0.34	mg/Kg wet	1.67		54.2	30-130			
2,4,6-Trichlorophenol	0.978	0.34	mg/Kg wet	1.67		58.7	30-130			
Surrogate: 2-Fluorophenol	4.39		mg/Kg wet	6.67		65.8	30-130			
Surrogate: Phenol-d6	3.93		mg/Kg wet	6.67		59.0	30-130			
Surrogate: Nitrobenzene-d5	2.00		mg/Kg wet	3.33		59.9	30-130			
Surrogate: 2-Fluorobiphenyl	2.17		mg/Kg wet	3.33		65.2	30-130			
Surrogate: 2,4,6-Tribromophenol	3.93		mg/Kg wet	6.67		59.0	30-130			
Surrogate: p-Terphenyl-d14	1.72		mg/Kg wet	3.33		51.7	30-130			
LCS Dup (B196704-BSD1)										
Prepared & Analyzed: 02/13/18										
Acenaphthene	0.963	0.17	mg/Kg wet	1.67		57.8	40-140	1.96	30	
Acenaphthylene	0.924	0.17	mg/Kg wet	1.67		55.4	40-140	1.53	30	
Acetophenone	0.921	0.34	mg/Kg wet	1.67		55.3	40-140	3.83	30	
Aniline	0.510	0.34	mg/Kg wet	1.67		30.6	* 40-140	18.0	30	L-04, V-34
Anthracene	0.984	0.17	mg/Kg wet	1.67		59.0	40-140	2.31	30	
Benzo(a)anthracene	0.993	0.17	mg/Kg wet	1.67		59.6	40-140	3.21	30	
Benzo(a)pyrene	1.00	0.17	mg/Kg wet	1.67		60.2	40-140	0.835	30	
Benzo(b)fluoranthene	0.988	0.17	mg/Kg wet	1.67		59.3	40-140	11.0	30	
Benzo(g,h,i)perylene	0.730	0.17	mg/Kg wet	1.67		43.8	40-140	39.7	* 30	R-05, V-06
Benzo(k)fluoranthene	0.981	0.17	mg/Kg wet	1.67		58.8	40-140	19.5	30	
Bis(2-chloroethoxy)methane	0.915	0.34	mg/Kg wet	1.67		54.9	40-140	16.1	30	
Bis(2-chloroethyl)ether	0.863	0.34	mg/Kg wet	1.67		51.8	40-140	14.0	30	
Bis(2-chloroisopropyl)ether	1.00	0.34	mg/Kg wet	1.67		60.0	40-140	1.75	30	
Bis(2-Ethylhexyl)phthalate	1.17	0.34	mg/Kg wet	1.67		70.3	40-140	16.6	30	
4-Bromophenylphenylether	1.05	0.34	mg/Kg wet	1.67		62.8	40-140	2.48	30	
Butylbenzylphthalate	1.36	0.34	mg/Kg wet	1.67		81.4	40-140	48.0	* 30	R-05
4-Chloroaniline	0.531	0.66	mg/Kg wet	1.67		31.9	15-140	1.50	30	V-34
2-Chloronaphthalene	0.839	0.34	mg/Kg wet	1.67		50.3	40-140	2.90	30	†
2-Chlorophenol	0.806	0.34	mg/Kg wet	1.67		48.4	30-130	15.0	30	
Chrysene	0.956	0.17	mg/Kg wet	1.67		57.4	40-140	2.61	30	
Dibenz(a,h)anthracene	0.799	0.17	mg/Kg wet	1.67		47.9	40-140	21.2	30	
Dibenzofuran	0.970	0.34	mg/Kg wet	1.67		58.2	40-140	1.56	30	
Di-n-butylphthalate	1.11	0.34	mg/Kg wet	1.67		66.7	40-140	6.30	30	V-06
1,2-Dichlorobenzene	0.801	0.34	mg/Kg wet	1.67		48.1	40-140	6.71	30	
1,3-Dichlorobenzene	0.694	0.34	mg/Kg wet	1.67		41.6	40-140	15.1	30	
1,4-Dichlorobenzene	0.778	0.34	mg/Kg wet	1.67		46.7	40-140	0.556	30	

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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B196704 - SW-846 3546

LCS Dup (B196704-BSD1)

Prepared & Analyzed: 02/13/18

3,3-Dichlorobenzidine	0.681	0.17	mg/Kg wet	1.67		40.9	40-140	3.04	30	V-34
2,4-Dichlorophenol	0.839	0.34	mg/Kg wet	1.67		50.3	30-130	6.76	30	
Diethylphthalate	1.05	0.34	mg/Kg wet	1.67		63.3	40-140	6.53	30	
2,4-Dimethylphenol	0.849	0.34	mg/Kg wet	1.67		51.0	30-130	18.2	30	
Dimethylphthalate	1.06	0.34	mg/Kg wet	1.67		63.5	40-140	5.77	30	V-06
2,4-Dinitrophenol	0.238	0.66	mg/Kg wet	1.67		14.3 *	15-140	9.49	30	L-07, V-04 †
2,4-Dinitrotoluene	1.00	0.34	mg/Kg wet	1.67		60.0	40-140	5.69	30	
2,6-Dinitrotoluene	1.02	0.34	mg/Kg wet	1.67		61.0	40-140	2.32	30	
Di-n-octylphthalate	1.11	0.34	mg/Kg wet	1.67		66.4	40-140	16.3	30	V-06
1,2-Diphenylhydrazine (as Azobenzene)	1.17	0.34	mg/Kg wet	1.67		70.4	40-140	5.63	30	
Fluoranthene	1.00	0.17	mg/Kg wet	1.67		60.0	40-140	14.0	30	
Fluorene	0.939	0.17	mg/Kg wet	1.67		56.3	40-140	1.79	30	
Hexachlorobenzene	0.996	0.34	mg/Kg wet	1.67		59.7	40-140	2.68	30	
Hexachlorobutadiene	0.805	0.34	mg/Kg wet	1.67		48.3	40-140	5.20	30	
Hexachloroethane	0.837	0.34	mg/Kg wet	1.67		50.2	40-140	5.82	30	
Indeno(1,2,3-cd)pyrene	0.781	0.17	mg/Kg wet	1.67		46.9	40-140	27.4	30	
Isophorone	0.950	0.34	mg/Kg wet	1.67		57.0	40-140	15.4	30	
2-Methylnaphthalene	0.848	0.17	mg/Kg wet	1.67		50.9	40-140	8.47	30	
2-Methylphenol	0.924	0.34	mg/Kg wet	1.67		55.4	30-130	6.02	30	
3/4-Methylphenol	0.979	0.34	mg/Kg wet	1.67		58.8	30-130	7.01	30	
Naphthalene	0.853	0.17	mg/Kg wet	1.67		51.2	40-140	2.96	30	
Nitrobenzene	0.870	0.34	mg/Kg wet	1.67		52.2	40-140	4.97	30	
2-Nitrophenol	0.731	0.34	mg/Kg wet	1.67		43.9	30-130	29.1	30	
4-Nitrophenol	1.04	0.66	mg/Kg wet	1.67		62.3	15-140	6.73	30	†
Pentachlorophenol	0.772	0.34	mg/Kg wet	1.67		46.3	30-130	10.6	30	
Phenanthrene	0.982	0.17	mg/Kg wet	1.67		58.9	40-140	1.65	30	
Phenol	0.891	0.34	mg/Kg wet	1.67		53.4	15-140	8.77	30	†
Pyrene	1.15	0.17	mg/Kg wet	1.67		69.2	40-140	31.8 *	30	R-05
1,2,4-Trichlorobenzene	0.768	0.34	mg/Kg wet	1.67		46.1	40-140	14.5	30	
2,4,5-Trichlorophenol	0.876	0.34	mg/Kg wet	1.67		52.6	30-130	3.07	30	
2,4,6-Trichlorophenol	0.972	0.34	mg/Kg wet	1.67		58.3	30-130	0.616	30	
Surrogate: 2-Fluorophenol	3.67		mg/Kg wet	6.67		55.1	30-130			
Surrogate: Phenol-d6	3.81		mg/Kg wet	6.67		57.2	30-130			
Surrogate: Nitrobenzene-d5	1.92		mg/Kg wet	3.33		57.7	30-130			
Surrogate: 2-Fluorobiphenyl	2.07		mg/Kg wet	3.33		62.2	30-130			
Surrogate: 2,4,6-Tribromophenol	3.96		mg/Kg wet	6.67		59.4	30-130			
Surrogate: p-Terphenyl-d14	2.61		mg/Kg wet	3.33		78.4	30-130			

Batch B196787 - SW-846 3510C

Blank (B196787-BLK1)

Prepared & Analyzed: 02/13/18

Benzo(a)anthracene	ND	0.050	µg/L							
Benzo(a)pyrene	ND	0.10	µg/L							
Benzo(b)fluoranthene	ND	0.050	µg/L							
Benzo(k)fluoranthene	ND	0.20	µg/L							
Bis(2-Ethylhexyl)phthalate	0.10	1.0	µg/L							Ja
Chrysene	ND	0.20	µg/L							
Dibenz(a,h)anthracene	ND	0.20	µg/L							
Indeno(1,2,3-cd)pyrene	ND	0.20	µg/L							
Pentachlorophenol	ND	1.0	µg/L							
Surrogate: 2-Fluorophenol	120		µg/L	200		59.8	15-110			
Surrogate: Phenol-d6	79.8		µg/L	200		39.9	15-110			

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QUALITY CONTROL
Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B196787 - SW-846 3510C										
Blank (B196787-BLK1)										
Prepared & Analyzed: 02/13/18										
Surrogate: Nitrobenzene-d5	77.0		µg/L	100		77.0	30-130			
Surrogate: 2-Fluorobiphenyl	76.2		µg/L	100		76.2	30-130			
Surrogate: 2,4,6-Tribromophenol	198		µg/L	200		98.9	15-110			
Surrogate: p-Terphenyl-d14	63.2		µg/L	100		63.2	30-130			
LCS (B196787-BS1)										
Prepared & Analyzed: 02/13/18										
Benzo(a)anthracene	41.4	1.2	µg/L	50.0		82.8	40-140			
Benzo(a)pyrene	43.9	2.5	µg/L	50.0		87.8	40-140			
Benzo(b)fluoranthene	43.1	1.2	µg/L	50.0		86.2	40-140			
Benzo(k)fluoranthene	43.4	5.0	µg/L	50.0		86.7	40-140			
Bis(2-Ethylhexyl)phthalate	50.0	25	µg/L	50.0		100	40-140			
Chrysene	37.5	5.0	µg/L	50.0		75.0	40-140			
Dibenz(a,h)anthracene	48.5	5.0	µg/L	50.0		97.0	40-140			
Indeno(1,2,3-cd)pyrene	46.6	5.0	µg/L	50.0		93.2	40-140			
Pentachlorophenol	39.7	25	µg/L	50.0		79.4	30-130			
Surrogate: 2-Fluorophenol	124		µg/L	200		61.8	15-110			
Surrogate: Phenol-d6	85.0		µg/L	200		42.5	15-110			
Surrogate: Nitrobenzene-d5	84.2		µg/L	100		84.2	30-130			
Surrogate: 2-Fluorobiphenyl	92.6		µg/L	100		92.6	30-130			
Surrogate: 2,4,6-Tribromophenol	207		µg/L	200		103	15-110			
Surrogate: p-Terphenyl-d14	66.0		µg/L	100		66.0	30-130			
LCS Dup (B196787-BSD1)										
Prepared & Analyzed: 02/13/18										
Benzo(a)anthracene	43.9	1.2	µg/L	50.0		87.8	40-140	5.87	20	
Benzo(a)pyrene	47.2	2.5	µg/L	50.0		94.4	40-140	7.30	20	
Benzo(b)fluoranthene	46.6	1.2	µg/L	50.0		93.3	40-140	7.85	20	
Benzo(k)fluoranthene	47.2	5.0	µg/L	50.0		94.4	40-140	8.50	20	
Bis(2-Ethylhexyl)phthalate	53.7	25	µg/L	50.0		107	40-140	7.09	20	
Chrysene	40.1	5.0	µg/L	50.0		80.2	40-140	6.70	20	
Dibenz(a,h)anthracene	52.2	5.0	µg/L	50.0		104	40-140	7.50	20	
Indeno(1,2,3-cd)pyrene	49.8	5.0	µg/L	50.0		99.6	40-140	6.69	50	‡
Pentachlorophenol	42.2	25	µg/L	50.0		84.4	30-130	6.11	50	‡
Surrogate: 2-Fluorophenol	133		µg/L	200		66.3	15-110			
Surrogate: Phenol-d6	90.7		µg/L	200		45.3	15-110			
Surrogate: Nitrobenzene-d5	91.3		µg/L	100		91.3	30-130			
Surrogate: 2-Fluorobiphenyl	99.1		µg/L	100		99.1	30-130			
Surrogate: 2,4,6-Tribromophenol	219		µg/L	200		109	15-110			
Surrogate: p-Terphenyl-d14	71.3		µg/L	100		71.3	30-130			

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QUALITY CONTROL
Semivolatile Organic Compounds by - GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B196705 - SW-846 3510C										
Blank (B196705-BLK1)				Prepared & Analyzed: 02/13/18						
Acenaphthene	ND	5.0	µg/L							
Acenaphthylene	ND	5.0	µg/L							
Anthracene	ND	5.0	µg/L							
Benzidine	ND	20	µg/L							V-05
Benzo(g,h,i)perylene	ND	5.0	µg/L							V-20
4-Bromophenylphenylether	ND	10	µg/L							
Butylbenzylphthalate	ND	10	µg/L							
4-Chloro-3-methylphenol	ND	10	µg/L							
Bis(2-chloroethyl)ether	ND	10	µg/L							
Bis(2-chloroisopropyl)ether	ND	10	µg/L							
2-Chloronaphthalene	ND	10	µg/L							
2-Chlorophenol	ND	10	µg/L							
4-Chlorophenylphenylether	ND	10	µg/L							
Di-n-butylphthalate	ND	10	µg/L							V-20
1,3-Dichlorobenzene	ND	5.0	µg/L							
1,4-Dichlorobenzene	ND	5.0	µg/L							
1,2-Dichlorobenzene	ND	5.0	µg/L							
3,3-Dichlorobenzidine	ND	10	µg/L							V-34
2,4-Dichlorophenol	ND	10	µg/L							
Diethylphthalate	ND	10	µg/L							
2,4-Dimethylphenol	ND	10	µg/L							
Dimethylphthalate	ND	10	µg/L							V-20
4,6-Dinitro-2-methylphenol	ND	10	µg/L							
2,4-Dinitrophenol	ND	10	µg/L							V-04
2,4-Dinitrotoluene	ND	10	µg/L							
2,6-Dinitrotoluene	ND	10	µg/L							
Di-n-octylphthalate	ND	10	µg/L							V-20
1,2-Diphenylhydrazine (as Azobenzene)	ND	10	µg/L							
Bis(2-Ethylhexyl)phthalate	ND	10	µg/L							V-20
Fluoranthene	ND	5.0	µg/L							
Fluorene	ND	5.0	µg/L							
Hexachlorobenzene	ND	10	µg/L							
Hexachlorobutadiene	ND	10	µg/L							
Hexachlorocyclopentadiene	ND	10	µg/L							V-19
Hexachloroethane	ND	10	µg/L							
Isophorone	ND	10	µg/L							
Naphthalene	ND	5.0	µg/L							
Nitrobenzene	ND	10	µg/L							
2-Nitrophenol	ND	10	µg/L							
4-Nitrophenol	ND	10	µg/L							
N-Nitrosodimethylamine	ND	10	µg/L							
N-Nitrosodiphenylamine	ND	10	µg/L							
N-Nitrosodi-n-propylamine	ND	10	µg/L							
Pentachlorophenol	ND	10	µg/L							
2-Methylnaphthalene	ND	5.0	µg/L							
Phenanthrene	ND	5.0	µg/L							
2-Methylphenol	ND	10	µg/L							
Phenol	ND	10	µg/L							
3/4-Methylphenol	ND	10	µg/L							
Pyrene	ND	5.0	µg/L							
1,2,4-Trichlorobenzene	ND	5.0	µg/L							
2,4,6-Trichlorophenol	ND	10	µg/L							

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QUALITY CONTROL
Semivolatile Organic Compounds by - GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B196705 - SW-846 3510C
Blank (B196705-BLK1)

Prepared & Analyzed: 02/13/18

Surrogate: 2-Fluorophenol	110		µg/L	200		54.9	15-110			
Surrogate: Phenol-d6	82.6		µg/L	200		41.3	15-110			
Surrogate: Nitrobenzene-d5	72.6		µg/L	100		72.6	30-130			
Surrogate: 2-Fluorobiphenyl	81.8		µg/L	100		81.8	30-130			
Surrogate: 2,4,6-Tribromophenol	167		µg/L	200		83.3	15-110			
Surrogate: p-Terphenyl-d14	97.5		µg/L	100		97.5	30-130			

LCS (B196705-BS1)

Prepared & Analyzed: 02/13/18

Acenaphthene	39.5	5.0	µg/L	50.0		79.0	47-145			
Acenaphthylene	36.9	5.0	µg/L	50.0		73.8	33-145			
Anthracene	40.6	5.0	µg/L	50.0		81.1	27-133			
Benzidine	34.2	20	µg/L	50.0		68.3	40-140			V-05
Benzo(g,h,i)perylene	42.2	5.0	µg/L	50.0		84.4	1-219			V-20
4-Bromophenylphenylether	40.9	10	µg/L	50.0		81.8	53-127			
Butylbenzylphthalate	47.2	10	µg/L	50.0		94.4	1-152			
4-Chloro-3-methylphenol	43.8	10	µg/L	50.0		87.6	22-147			
Bis(2-chloroethyl)ether	38.6	10	µg/L	50.0		77.1	12-158			
Bis(2-chloroisopropyl)ether	42.2	10	µg/L	50.0		84.5	36-166			
2-Chloronaphthalene	32.2	10	µg/L	50.0		64.4	60-118			
2-Chlorophenol	37.4	10	µg/L	50.0		74.8	23-134			
4-Chlorophenylphenylether	37.1	10	µg/L	50.0		74.2	25-158			
Di-n-butylphthalate	44.4	10	µg/L	50.0		88.7	1-118			V-20
1,3-Dichlorobenzene	34.9	5.0	µg/L	50.0		69.8	1-172			
1,4-Dichlorobenzene	35.2	5.0	µg/L	50.0		70.4	20-124			
1,2-Dichlorobenzene	35.6	5.0	µg/L	50.0		71.1	32-129			
3,3-Dichlorobenzidine	43.0	10	µg/L	50.0		86.0	1-262			V-34
2,4-Dichlorophenol	38.4	10	µg/L	50.0		76.8	39-135			
Diethylphthalate	41.8	10	µg/L	50.0		83.6	1-114			
2,4-Dimethylphenol	41.6	10	µg/L	50.0		83.2	32-119			
Dimethylphthalate	41.6	10	µg/L	50.0		83.3	1-112			V-20
4,6-Dinitro-2-methylphenol	36.2	10	µg/L	50.0		72.4	1-181			
2,4-Dinitrophenol	31.3	10	µg/L	50.0		62.6	1-191			V-04
2,4-Dinitrotoluene	40.4	10	µg/L	50.0		80.8	39-139			
2,6-Dinitrotoluene	40.3	10	µg/L	50.0		80.6	50-158			
Di-n-octylphthalate	49.7	10	µg/L	50.0		99.4	4-146			V-20
1,2-Diphenylhydrazine (as Azobenzene)	46.4	10	µg/L	50.0		92.8	40-140			
Bis(2-Ethylhexyl)phthalate	46.4	10	µg/L	50.0		92.8	8-158			V-20
Fluoranthene	38.6	5.0	µg/L	50.0		77.3	26-137			
Fluorene	38.3	5.0	µg/L	50.0		76.7	59-121			
Hexachlorobenzene	40.1	10	µg/L	50.0		80.3	1-152			
Hexachlorobutadiene	36.9	10	µg/L	50.0		73.8	24-116			
Hexachlorocyclopentadiene	29.5	10	µg/L	50.0		59.0	40-140			V-19
Hexachloroethane	39.8	10	µg/L	50.0		79.5	40-113			
Isophorone	45.3	10	µg/L	50.0		90.6	21-196			
Naphthalene	38.5	5.0	µg/L	50.0		76.9	21-133			
Nitrobenzene	42.0	10	µg/L	50.0		84.0	35-180			
2-Nitrophenol	38.9	10	µg/L	50.0		77.9	29-182			
4-Nitrophenol	26.6	10	µg/L	50.0		53.1	1-132			
N-Nitrosodimethylamine	29.5	10	µg/L	50.0		58.9	40-140			
N-Nitrosodiphenylamine	50.0	10	µg/L	50.0		99.9	40-140			
N-Nitrosodi-n-propylamine	42.4	10	µg/L	50.0		84.9	1-230			
Pentachlorophenol	33.2	10	µg/L	50.0		66.3	14-176			

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QUALITY CONTROL
Semivolatile Organic Compounds by - GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B196705 - SW-846 3510C										
LCS (B196705-BS1)				Prepared & Analyzed: 02/13/18						
2-Methylnaphthalene	42.3	5.0	µg/L	50.0		84.6	40-140			
Phenanthrene	40.7	5.0	µg/L	50.0		81.4	54-120			
2-Methylphenol	33.5	10	µg/L	50.0		67.1	30-130			
Phenol	21.3	10	µg/L	50.0		42.6	5-112			
3/4-Methylphenol	35.3	10	µg/L	50.0		70.6	30-130			
Pyrene	40.4	5.0	µg/L	50.0		80.9	52-115			
1,2,4-Trichlorobenzene	35.4	5.0	µg/L	50.0		70.8	44-142			
2,4,6-Trichlorophenol	36.2	10	µg/L	50.0		72.4	37-144			
Surrogate: 2-Fluorophenol	116		µg/L	200		58.0	15-110			
Surrogate: Phenol-d6	76.7		µg/L	200		38.3	15-110			
Surrogate: Nitrobenzene-d5	92.1		µg/L	100		92.1	30-130			
Surrogate: 2-Fluorobiphenyl	82.2		µg/L	100		82.2	30-130			
Surrogate: 2,4,6-Tribromophenol	165		µg/L	200		82.6	15-110			
Surrogate: p-Terphenyl-d14	88.6		µg/L	100		88.6	30-130			
LCS Dup (B196705-BSD1)				Prepared & Analyzed: 02/13/18						
Acenaphthene	38.9	5.0	µg/L	50.0		77.7	47-145	1.58		
Acenaphthylene	37.4	5.0	µg/L	50.0		74.7	33-145	1.18		
Anthracene	39.8	5.0	µg/L	50.0		79.6	27-133	1.92		
Benzidine	53.3	20	µg/L	50.0		107	40-140	43.7		V-05
Benzo(g,h,i)perylene	44.9	5.0	µg/L	50.0		89.7	1-219	6.16		V-20
4-Bromophenylphenylether	42.1	10	µg/L	50.0		84.2	53-127	2.87		
Butylbenzylphthalate	48.9	10	µg/L	50.0		97.8	1-152	3.58		
4-Chloro-3-methylphenol	40.3	10	µg/L	50.0		80.5	22-147	8.45		
Bis(2-chloroethyl)ether	38.0	10	µg/L	50.0		76.1	12-158	1.38		
Bis(2-chloroisopropyl)ether	37.6	10	µg/L	50.0		75.3	36-166	11.5		
2-Chloronaphthalene	45.2	10	µg/L	50.0		90.3	60-118	33.6		
2-Chlorophenol	38.5	10	µg/L	50.0		77.0	23-134	2.90		
4-Chlorophenylphenylether	36.7	10	µg/L	50.0		73.5	25-158	0.975		
Di-n-butylphthalate	46.3	10	µg/L	50.0		92.6	1-118	4.26		V-20
1,3-Dichlorobenzene	37.6	5.0	µg/L	50.0		75.2	1-172	7.51		
1,4-Dichlorobenzene	36.2	5.0	µg/L	50.0		72.3	20-124	2.78		
1,2-Dichlorobenzene	32.9	5.0	µg/L	50.0		65.8	32-129	7.74		
3,3-Dichlorobenzidine	43.2	10	µg/L	50.0		86.4	1-262	0.487		V-34
2,4-Dichlorophenol	32.2	10	µg/L	50.0		64.4	39-135	17.7		
Diethylphthalate	41.1	10	µg/L	50.0		82.2	1-114	1.74		
2,4-Dimethylphenol	33.5	10	µg/L	50.0		67.0	32-119	21.6		
Dimethylphthalate	47.8	10	µg/L	50.0		95.6	1-112	13.8		V-20
4,6-Dinitro-2-methylphenol	33.3	10	µg/L	50.0		66.6	1-181	8.26		
2,4-Dinitrophenol	28.0	10	µg/L	50.0		56.1	1-191	11.0		V-04
2,4-Dinitrotoluene	37.6	10	µg/L	50.0		75.1	39-139	7.34		
2,6-Dinitrotoluene	39.9	10	µg/L	50.0		79.7	50-158	1.05		
Di-n-octylphthalate	51.6	10	µg/L	50.0		103	4-146	3.79		V-20
1,2-Diphenylhydrazine (as Azobenzene)	46.6	10	µg/L	50.0		93.1	40-140	0.366		
Bis(2-Ethylhexyl)phthalate	49.6	10	µg/L	50.0		99.3	8-158	6.75		V-20
Fluoranthene	38.8	5.0	µg/L	50.0		77.6	26-137	0.362		
Fluorene	36.3	5.0	µg/L	50.0		72.6	59-121	5.44		
Hexachlorobenzene	40.8	10	µg/L	50.0		81.7	1-152	1.70		
Hexachlorobutadiene	40.0	10	µg/L	50.0		80.0	24-116	8.06		
Hexachlorocyclopentadiene	36.6	10	µg/L	50.0		73.3	40-140	21.5		V-19
Hexachloroethane	36.3	10	µg/L	50.0		72.6	40-113	9.02		
Isophorone	39.2	10	µg/L	50.0		78.5	21-196	14.3		

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QUALITY CONTROL
Semivolatile Organic Compounds by - GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B196705 - SW-846 3510C										
LCS Dup (B196705-BSD1)				Prepared & Analyzed: 02/13/18						
Naphthalene	38.8	5.0	µg/L	50.0		77.6	21-133	0.829		
Nitrobenzene	38.4	10	µg/L	50.0		76.9	35-180	8.88		
2-Nitrophenol	32.4	10	µg/L	50.0		64.9	29-182	18.2		
4-Nitrophenol	22.9	10	µg/L	50.0		45.8	1-132	14.8		
N-Nitrosodimethylamine	19.2	10	µg/L	50.0		38.4	* 40-140	42.2		L-07
N-Nitrosodiphenylamine	50.0	10	µg/L	50.0		99.9	40-140	0.0400		
N-Nitrosodi-n-propylamine	38.6	10	µg/L	50.0		77.3	1-230	9.35		
Pentachlorophenol	32.8	10	µg/L	50.0		65.5	14-176	1.18		
2-Methylnaphthalene	40.0	5.0	µg/L	50.0		80.1	40-140	5.49	20	
Phenanthrene	39.2	5.0	µg/L	50.0		78.5	54-120	3.60		
2-Methylphenol	29.5	10	µg/L	50.0		59.1	30-130	12.7	20	
Phenol	18.1	10	µg/L	50.0		36.1	5-112	16.4		
3/4-Methylphenol	28.9	10	µg/L	50.0		57.9	30-130	19.8	20	
Pyrene	41.4	5.0	µg/L	50.0		82.7	52-115	2.27		
1,2,4-Trichlorobenzene	31.2	5.0	µg/L	50.0		62.4	44-142	12.6		
2,4,6-Trichlorophenol	44.0	10	µg/L	50.0		88.0	37-144	19.4		
Surrogate: 2-Fluorophenol	97.6		µg/L	200		48.8	15-110			
Surrogate: Phenol-d6	68.4		µg/L	200		34.2	15-110			
Surrogate: Nitrobenzene-d5	80.9		µg/L	100		80.9	30-130			
Surrogate: 2-Fluorobiphenyl	101		µg/L	100		101	30-130			
Surrogate: 2,4,6-Tribromophenol	156		µg/L	200		77.9	15-110			
Surrogate: p-Terphenyl-d14	95.9		µg/L	100		95.9	30-130			

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QUALITY CONTROL
Polychlorinated Biphenyls By GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B196707 - SW-846 3546										
Blank (B196707-BLK1)										
Prepared & Analyzed: 02/13/18										
Aroclor-1016	ND	0.020	mg/Kg wet							
Aroclor-1016 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1221	ND	0.020	mg/Kg wet							
Aroclor-1221 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1232	ND	0.020	mg/Kg wet							
Aroclor-1232 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1242	ND	0.020	mg/Kg wet							
Aroclor-1242 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1248	ND	0.020	mg/Kg wet							
Aroclor-1248 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1254	ND	0.020	mg/Kg wet							
Aroclor-1254 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1260	ND	0.020	mg/Kg wet							
Aroclor-1260 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1262	ND	0.020	mg/Kg wet							
Aroclor-1262 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1268	ND	0.020	mg/Kg wet							
Aroclor-1268 [2C]	ND	0.020	mg/Kg wet							
Surrogate: Decachlorobiphenyl	0.212		mg/Kg wet	0.200		106	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.201		mg/Kg wet	0.200		101	30-150			
Surrogate: Tetrachloro-m-xylene	0.187		mg/Kg wet	0.200		93.6	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.192		mg/Kg wet	0.200		96.1	30-150			
LCS (B196707-BS1)										
Prepared & Analyzed: 02/13/18										
Aroclor-1016	0.20	0.020	mg/Kg wet	0.200		98.5	40-140			
Aroclor-1016 [2C]	0.21	0.020	mg/Kg wet	0.200		103	40-140			
Aroclor-1260	0.18	0.020	mg/Kg wet	0.200		89.3	40-140			
Aroclor-1260 [2C]	0.18	0.020	mg/Kg wet	0.200		87.7	40-140			
Surrogate: Decachlorobiphenyl	0.222		mg/Kg wet	0.200		111	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.212		mg/Kg wet	0.200		106	30-150			
Surrogate: Tetrachloro-m-xylene	0.193		mg/Kg wet	0.200		96.7	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.197		mg/Kg wet	0.200		98.7	30-150			
LCS Dup (B196707-BSD1)										
Prepared: 02/13/18 Analyzed: 02/14/18										
Aroclor-1016	0.19	0.020	mg/Kg wet	0.200		96.2	40-140	2.38	30	
Aroclor-1016 [2C]	0.20	0.020	mg/Kg wet	0.200		99.8	40-140	3.57	30	
Aroclor-1260	0.18	0.020	mg/Kg wet	0.200		89.3	40-140	0.00784	30	
Aroclor-1260 [2C]	0.17	0.020	mg/Kg wet	0.200		84.2	40-140	4.16	30	
Surrogate: Decachlorobiphenyl	0.215		mg/Kg wet	0.200		108	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.204		mg/Kg wet	0.200		102	30-150			
Surrogate: Tetrachloro-m-xylene	0.184		mg/Kg wet	0.200		92.0	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.188		mg/Kg wet	0.200		93.9	30-150			

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QUALITY CONTROL
Polychlorinated Biphenyls By GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B196794 - SW-846 3510C										
Blank (B196794-BLK1)										
Prepared & Analyzed: 02/14/18										
Aroclor-1016	ND	0.10	µg/L							
Aroclor-1016 [2C]	ND	0.10	µg/L							
Aroclor-1221	ND	0.10	µg/L							
Aroclor-1221 [2C]	ND	0.10	µg/L							
Aroclor-1232	ND	0.10	µg/L							
Aroclor-1232 [2C]	ND	0.10	µg/L							
Aroclor-1242	ND	0.10	µg/L							
Aroclor-1242 [2C]	ND	0.10	µg/L							
Aroclor-1248	ND	0.10	µg/L							
Aroclor-1248 [2C]	ND	0.10	µg/L							
Aroclor-1254	ND	0.10	µg/L							
Aroclor-1254 [2C]	ND	0.10	µg/L							
Aroclor-1260	ND	0.10	µg/L							
Aroclor-1260 [2C]	ND	0.10	µg/L							
Surrogate: Decachlorobiphenyl	1.19		µg/L	2.00		59.7	30-150			
Surrogate: Decachlorobiphenyl [2C]	1.49		µg/L	2.00		74.7	30-150			
Surrogate: Tetrachloro-m-xylene	1.55		µg/L	2.00		77.6	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	1.71		µg/L	2.00		85.4	30-150			
LCS (B196794-BS1)										
Prepared & Analyzed: 02/14/18										
Aroclor-1016	0.46	0.20	µg/L	0.500		91.0	50-114			
Aroclor-1016 [2C]	0.45	0.20	µg/L	0.500		90.6	50-114			
Aroclor-1260	0.43	0.20	µg/L	0.500		85.0	8-127			
Aroclor-1260 [2C]	0.40	0.20	µg/L	0.500		79.9	8-127			
Surrogate: Decachlorobiphenyl	1.47		µg/L	2.00		73.6	30-150			
Surrogate: Decachlorobiphenyl [2C]	1.80		µg/L	2.00		90.0	30-150			
Surrogate: Tetrachloro-m-xylene	1.54		µg/L	2.00		77.2	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	1.65		µg/L	2.00		82.7	30-150			
LCS Dup (B196794-BSD1)										
Prepared & Analyzed: 02/14/18										
Aroclor-1016	0.49	0.20	µg/L	0.500		97.7	50-114	7.09		
Aroclor-1016 [2C]	0.51	0.20	µg/L	0.500		103	50-114	12.8		
Aroclor-1260	0.45	0.20	µg/L	0.500		90.0	8-127	5.66		
Aroclor-1260 [2C]	0.42	0.20	µg/L	0.500		84.6	8-127	5.76		
Surrogate: Decachlorobiphenyl	1.56		µg/L	2.00		77.8	30-150			
Surrogate: Decachlorobiphenyl [2C]	1.91		µg/L	2.00		95.7	30-150			
Surrogate: Tetrachloro-m-xylene	1.60		µg/L	2.00		80.0	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	1.72		µg/L	2.00		85.8	30-150			

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QUALITY CONTROL
Petroleum Hydrocarbons Analyses - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B196790 - SW-846 3546										
Blank (B196790-BLK1)					Prepared: 02/13/18 Analyzed: 02/14/18					
TPH (C9-C36)	ND	8.3	mg/Kg wet							
Surrogate: o-Terphenyl	2.70		mg/Kg wet	3.33		80.9	40-140			
LCS (B196790-BS1)					Prepared: 02/13/18 Analyzed: 02/14/18					
TPH (C9-C36)	24.6	8.3	mg/Kg wet	33.3		73.9	40-140			
Surrogate: o-Terphenyl	2.82		mg/Kg wet	3.33		84.6	40-140			
LCS Dup (B196790-BSD1)					Prepared: 02/13/18 Analyzed: 02/14/18					
TPH (C9-C36)	24.9	8.3	mg/Kg wet	33.3		74.7	40-140	1.01	30	
Surrogate: o-Terphenyl	2.87		mg/Kg wet	3.33		86.1	40-140			

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QUALITY CONTROL
Petroleum Hydrocarbons Analyses - EPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B196793 - SW-846 3510C
Blank (B196793-BLK1)

Prepared & Analyzed: 02/14/18

C9-C18 Aliphatics	ND	100	µg/L							
C19-C36 Aliphatics	ND	100	µg/L							
Unadjusted C11-C22 Aromatics	ND	100	µg/L							
C11-C22 Aromatics	ND	100	µg/L							
Acenaphthene	ND	2.0	µg/L							
Acenaphthylene	ND	2.0	µg/L							
Anthracene	ND	2.0	µg/L							
Benzo(a)anthracene	ND	2.0	µg/L							
Benzo(a)pyrene	ND	2.0	µg/L							
Benzo(b)fluoranthene	ND	2.0	µg/L							
Benzo(g,h,i)perylene	ND	2.0	µg/L							
Benzo(k)fluoranthene	ND	2.0	µg/L							
Chrysene	ND	2.0	µg/L							
Dibenz(a,h)anthracene	ND	2.0	µg/L							
Fluoranthene	ND	2.0	µg/L							
Fluorene	ND	2.0	µg/L							
Indeno(1,2,3-cd)pyrene	ND	2.0	µg/L							
2-Methylnaphthalene	ND	2.0	µg/L							
Naphthalene	ND	2.0	µg/L							
Phenanthrene	ND	2.0	µg/L							
Pyrene	ND	2.0	µg/L							
n-Decane	ND	2.0	µg/L							
n-Docosane	ND	2.0	µg/L							
n-Dodecane	ND	2.0	µg/L							
n-Eicosane	ND	2.0	µg/L							
n-Hexacosane	ND	2.0	µg/L							
n-Hexadecane	ND	2.0	µg/L							
n-Hexatriacontane	ND	2.0	µg/L							
n-Nonadecane	ND	2.0	µg/L							
n-Nonane	ND	2.0	µg/L							
n-Octacosane	ND	2.0	µg/L							
n-Octadecane	ND	2.0	µg/L							
n-Tetracosane	ND	2.0	µg/L							
n-Tetradecane	ND	2.0	µg/L							
n-Triacontane	ND	2.0	µg/L							
Naphthalene-aliphatic fraction	ND	2.0	µg/L							
2-Methylnaphthalene-aliphatic fraction	ND	2.0	µg/L							
Surrogate: Chlorooctadecane (COD)	95.9		µg/L	99.8		96.1	40-140			
Surrogate: o-Terphenyl (OTP)	86.2		µg/L	100		86.2	40-140			
Surrogate: 2-Bromonaphthalene	88.3		µg/L	100		88.0	40-140			
Surrogate: 2-Fluorobiphenyl	94.5		µg/L	105		90.2	40-140			

LCS (B196793-BS1)

Prepared & Analyzed: 02/14/18

C9-C18 Aliphatics	492	100	µg/L	600		82.0	0-200			
C19-C36 Aliphatics	783	100	µg/L	800		97.8	0-200			
Acenaphthene	76.3	2.0	µg/L	100		76.3	40-140			
Acenaphthylene	76.0	2.0	µg/L	100		76.0	40-140			
Anthracene	83.8	2.0	µg/L	100		83.8	40-140			
Benzo(a)anthracene	85.8	2.0	µg/L	100		85.8	40-140			
Benzo(a)pyrene	79.7	2.0	µg/L	100		79.7	40-140			
Benzo(b)fluoranthene	85.1	2.0	µg/L	100		85.1	40-140			
Benzo(g,h,i)perylene	81.4	2.0	µg/L	100		81.4	40-140			

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QUALITY CONTROL
Petroleum Hydrocarbons Analyses - EPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B196793 - SW-846 3510C
LCS (B196793-BS1)

Prepared & Analyzed: 02/14/18

Benzo(k)fluoranthene	83.3	2.0	µg/L	100		83.3	40-140			
Chrysene	85.9	2.0	µg/L	100		85.9	40-140			
Dibenz(a,h)anthracene	85.0	2.0	µg/L	100		85.0	40-140			
Fluoranthene	84.8	2.0	µg/L	100		84.8	40-140			
Fluorene	80.9	2.0	µg/L	100		80.9	40-140			
Indeno(1,2,3-cd)pyrene	79.5	2.0	µg/L	100		79.5	40-140			
2-Methylnaphthalene	78.1	2.0	µg/L	100		78.1	40-140			
Naphthalene	69.2	2.0	µg/L	100		69.2	40-140			
Phenanthrene	85.3	2.0	µg/L	100		85.3	40-140			
Pyrene	85.6	2.0	µg/L	100		85.6	40-140			
n-Decane	58.7	2.0	µg/L	100		58.7	40-140			
n-Docosane	95.4	2.0	µg/L	100		95.4	40-140			
n-Dodecane	66.9	2.0	µg/L	100		66.9	40-140			
n-Eicosane	93.7	2.0	µg/L	100		93.7	40-140			
n-Hexacosane	93.8	2.0	µg/L	100		93.8	40-140			
n-Hexadecane	84.8	2.0	µg/L	100		84.8	40-140			
n-Hexatriacontane	79.0	2.0	µg/L	100		79.0	40-140			
n-Nonadecane	90.5	2.0	µg/L	100		90.5	40-140			
n-Nonane	48.2	2.0	µg/L	100		48.2	30-140			
n-Octacosane	89.1	2.0	µg/L	100		89.1	40-140			
n-Octadecane	92.3	2.0	µg/L	100		92.3	40-140			
n-Tetracosane	94.6	2.0	µg/L	100		94.6	40-140			
n-Tetradecane	77.8	2.0	µg/L	100		77.8	40-140			
n-Triacontane	85.1	2.0	µg/L	100		85.1	40-140			
Naphthalene-aliphatic fraction	1.10	2.0	µg/L	100		1.10	0-5			
2-Methylnaphthalene-aliphatic fraction	ND	2.0	µg/L	100			0-5			
Surrogate: Chlorooctadecane (COD)	96.0		µg/L	99.8		96.2	40-140			
Surrogate: o-Terphenyl (OTP)	85.7		µg/L	100		85.7	40-140			
Surrogate: 2-Bromonaphthalene	86.7		µg/L	100		86.3	40-140			
Surrogate: 2-Fluorobiphenyl	93.5		µg/L	105		89.2	40-140			

LCS Dup (B196793-BSD1)

Prepared & Analyzed: 02/14/18

C9-C18 Aliphatics	522	100	µg/L	600		87.0	0-200	5.90		
C19-C36 Aliphatics	829	100	µg/L	800		104	0-200	5.74		
Acenaphthene	79.8	2.0	µg/L	100		79.8	40-140	4.43	25	
Acenaphthylene	79.3	2.0	µg/L	100		79.3	40-140	4.26	25	
Anthracene	86.7	2.0	µg/L	100		86.7	40-140	3.40	25	
Benzo(a)anthracene	88.6	2.0	µg/L	100		88.6	40-140	3.23	25	
Benzo(a)pyrene	82.2	2.0	µg/L	100		82.2	40-140	3.09	25	
Benzo(b)fluoranthene	87.5	2.0	µg/L	100		87.5	40-140	2.73	25	
Benzo(g,h,i)perylene	84.5	2.0	µg/L	100		84.5	40-140	3.76	25	
Benzo(k)fluoranthene	86.3	2.0	µg/L	100		86.3	40-140	3.57	25	
Chrysene	88.8	2.0	µg/L	100		88.8	40-140	3.26	25	
Dibenz(a,h)anthracene	88.4	2.0	µg/L	100		88.4	40-140	3.94	25	
Fluoranthene	87.8	2.0	µg/L	100		87.8	40-140	3.43	25	
Fluorene	84.2	2.0	µg/L	100		84.2	40-140	4.04	25	
Indeno(1,2,3-cd)pyrene	82.9	2.0	µg/L	100		82.9	40-140	4.20	25	
2-Methylnaphthalene	81.6	2.0	µg/L	100		81.6	40-140	4.48	25	
Naphthalene	72.2	2.0	µg/L	100		72.2	40-140	4.29	25	
Phenanthrene	88.5	2.0	µg/L	100		88.5	40-140	3.73	25	
Pyrene	88.4	2.0	µg/L	100		88.4	40-140	3.30	25	
n-Decane	61.6	2.0	µg/L	100		61.6	40-140	4.72	25	

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QUALITY CONTROL
Petroleum Hydrocarbons Analyses - EPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B196793 - SW-846 3510C
LCS Dup (B196793-BSD1)

Prepared & Analyzed: 02/14/18

n-Docosane	101	2.0	µg/L	100		101	40-140	6.15	25	
n-Dodecane	71.2	2.0	µg/L	100		71.2	40-140	6.16	25	
n-Eicosane	99.9	2.0	µg/L	100		99.9	40-140	6.39	25	
n-Hexacosane	100	2.0	µg/L	100		100	40-140	6.57	25	
n-Hexadecane	90.3	2.0	µg/L	100		90.3	40-140	6.26	25	
n-Hexatriacontane	84.1	2.0	µg/L	100		84.1	40-140	6.26	25	
n-Nonadecane	96.5	2.0	µg/L	100		96.5	40-140	6.48	25	
n-Nonane	49.9	2.0	µg/L	100		49.9	30-140	3.38	25	
n-Octacosane	95.1	2.0	µg/L	100		95.1	40-140	6.48	25	
n-Octadecane	98.3	2.0	µg/L	100		98.3	40-140	6.21	25	
n-Tetracosane	101	2.0	µg/L	100		101	40-140	6.68	25	
n-Tetradecane	83.2	2.0	µg/L	100		83.2	40-140	6.71	25	
n-Triacontane	90.7	2.0	µg/L	100		90.7	40-140	6.33	25	
Naphthalene-aliphatic fraction	ND	2.0	µg/L	100			0-5			
2-Methylnaphthalene-aliphatic fraction	ND	2.0	µg/L	100			0-5			
Surrogate: Chlorooctadecane (COD)	101		µg/L	99.8		101	40-140			
Surrogate: o-Terphenyl (OTP)	88.1		µg/L	100		88.1	40-140			
Surrogate: 2-Bromonaphthalene	89.9		µg/L	100		89.5	40-140			
Surrogate: 2-Fluorobiphenyl	94.7		µg/L	105		90.4	40-140			

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QUALITY CONTROL
Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B196773 - SW-846 7471
Blank (B196773-BLK1)

Prepared & Analyzed: 02/14/18

Mercury	ND	0.025	mg/Kg wet							
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LCS (B196773-BS1)

Prepared & Analyzed: 02/14/18

Mercury	12.2	2.0	mg/Kg wet	9.36		130	* 73.7-126.3			L-07
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LCS Dup (B196773-BSD1)

Prepared & Analyzed: 02/14/18

Mercury	9.66	2.0	mg/Kg wet	9.36		103	73.7-126.3	23.3	30	
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Batch B196818 - SW-846 3051
Blank (B196818-BLK1)

Prepared & Analyzed: 02/14/18

Arsenic	ND	1.7	mg/Kg wet							
Barium	ND	1.7	mg/Kg wet							
Cadmium	ND	0.17	mg/Kg wet							
Chromium	ND	0.33	mg/Kg wet							
Lead	ND	0.50	mg/Kg wet							
Selenium	ND	3.3	mg/Kg wet							
Silver	ND	0.33	mg/Kg wet							

LCS (B196818-BS1)

Prepared & Analyzed: 02/14/18

Arsenic	140	5.0	mg/Kg wet	147		95.4	83-117			
Barium	321	5.0	mg/Kg wet	314		102	82.2-117.8			
Cadmium	181	0.50	mg/Kg wet	193		94.0	82.4-117.6			
Chromium	91.4	1.0	mg/Kg wet	82.6		111	81.8-118.2			
Lead	92.1	1.5	mg/Kg wet	92.3		99.7	82.8-117			
Selenium	170	10	mg/Kg wet	187		90.8	79.1-121.4			
Silver	40.2	1.0	mg/Kg wet	40.7		98.8	79.6-120.4			

LCS Dup (B196818-BSD1)

Prepared & Analyzed: 02/14/18

Arsenic	148	5.1	mg/Kg wet	147		101	83-117	5.68	30	
Barium	311	5.1	mg/Kg wet	314		99.0	82.2-117.8	3.07	30	
Cadmium	182	0.51	mg/Kg wet	193		94.2	82.4-117.6	0.126	30	
Chromium	84.4	1.0	mg/Kg wet	82.6		102	81.8-118.2	7.98	30	
Lead	103	1.5	mg/Kg wet	92.3		111	82.8-117	10.9	30	
Selenium	168	10	mg/Kg wet	187		90.0	79.1-121.4	0.820	30	
Silver	40.4	1.0	mg/Kg wet	40.7		99.3	79.6-120.4	0.564	30	

MRL Check (B196818-MRL1)

Prepared & Analyzed: 02/14/18

Lead	0.604	0.50	mg/Kg wet	0.495		122	* 80-120			M-10
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Batch B196821 - EPA 200.7
Blank (B196821-BLK1)

Prepared: 02/14/18 Analyzed: 02/15/18

Iron	ND	0.050	mg/L							
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QUALITY CONTROL
Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B196821 - EPA 200.7
LCS (B196821-BS1)

Prepared: 02/14/18 Analyzed: 02/15/18

Iron	4.14	0.050	mg/L	4.00		104	85-115			
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LCS Dup (B196821-BSD1)

Prepared: 02/14/18 Analyzed: 02/15/18

Iron	4.14	0.050	mg/L	4.00		103	85-115	0.0310	20	
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Batch B196822 - EPA 200.8
Blank (B196822-BLK1)

Prepared: 02/14/18 Analyzed: 02/15/18

Antimony	ND	1.0	µg/L							
Arsenic	ND	1.0	µg/L							
Cadmium	ND	0.20	µg/L							
Chromium	ND	10	µg/L							
Copper	ND	1.0	µg/L							
Lead	ND	0.50	µg/L							
Nickel	ND	5.0	µg/L							
Selenium	ND	5.0	µg/L							
Silver	ND	0.20	µg/L							
Zinc	ND	20	µg/L							

LCS (B196822-BS1)

Prepared: 02/14/18 Analyzed: 02/15/18

Antimony	430	10	µg/L	500		86.0	85-115			
Arsenic	506	10	µg/L	500		101	85-115			
Cadmium	516	2.0	µg/L	500		103	85-115			
Chromium	506	100	µg/L	500		101	85-115			
Copper	1000	10	µg/L	1000		100	85-115			
Lead	506	5.0	µg/L	500		101	85-115			
Nickel	499	50	µg/L	500		99.8	85-115			
Selenium	493	50	µg/L	500		98.6	85-115			
Silver	496	2.0	µg/L	500		99.3	85-115			
Zinc	1030	200	µg/L	1000		103	85-115			

LCS Dup (B196822-BSD1)

Prepared: 02/14/18 Analyzed: 02/15/18

Antimony	461	10	µg/L	500		92.2	85-115	7.01	20	
Arsenic	528	10	µg/L	500		106	85-115	4.32	20	
Cadmium	538	2.0	µg/L	500		108	85-115	4.25	20	
Chromium	522	100	µg/L	500		104	85-115	3.08	20	
Copper	1030	10	µg/L	1000		103	85-115	2.76	20	
Lead	525	5.0	µg/L	500		105	85-115	3.85	20	
Nickel	517	50	µg/L	500		103	85-115	3.57	20	
Selenium	521	50	µg/L	500		104	85-115	5.64	20	
Silver	522	2.0	µg/L	500		104	85-115	5.12	20	
Zinc	1060	200	µg/L	1000		106	85-115	2.88	20	

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QUALITY CONTROL
Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B196827 - EPA 245.1										
Blank (B196827-BLK1)				Prepared: 02/14/18 Analyzed: 02/15/18						
Mercury	ND	0.00010	mg/L							
LCS (B196827-BS1)				Prepared: 02/14/18 Analyzed: 02/15/18						
Mercury	0.00197	0.00010	mg/L	0.00200		98.4	85-115			
LCS Dup (B196827-BSD1)				Prepared: 02/14/18 Analyzed: 02/15/18						
Mercury	0.00192	0.00010	mg/L	0.00200		96.2	85-115	2.19	20	
Duplicate (B196827-DUP1)				Source: 18B0433-02		Prepared: 02/14/18 Analyzed: 02/15/18				
Mercury	ND	0.00010	mg/L		ND			NC	30	
Matrix Spike (B196827-MS1)				Source: 18B0433-02		Prepared: 02/14/18 Analyzed: 02/15/18				
Mercury	0.00192	0.00010	mg/L	0.00200	ND	96.1	75-125			

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QUALITY CONTROL
Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B196802 - SW-846 9045C										
LCS (B196802-BS1)				Prepared & Analyzed: 02/13/18						
pH	6.00		pH Units	6.00		100	98.5-110			
Batch B196804 - SM21-22 3500 Cr B										
Blank (B196804-BLK1)				Prepared & Analyzed: 02/13/18						
Hexavalent Chromium	ND	0.0040	mg/L							
LCS (B196804-BS1)				Prepared & Analyzed: 02/13/18						
Hexavalent Chromium	0.098	0.0040	mg/L	0.100		98.3	86.6-115			
LCS Dup (B196804-BSD1)				Prepared & Analyzed: 02/13/18						
Hexavalent Chromium	0.092	0.0040	mg/L	0.100		92.4	86.6-115	6.21	6.61	
Matrix Spike (B196804-MS1)				Source: 18B0433-02		Prepared & Analyzed: 02/13/18				
Hexavalent Chromium	0.079	0.0040	mg/L	0.100	0.0024	76.9	23.5-142			
Matrix Spike Dup (B196804-MSD1)				Source: 18B0433-02		Prepared & Analyzed: 02/13/18				
Hexavalent Chromium	0.081	0.0040	mg/L	0.100	0.0024	78.1	23.5-142	1.48	7.59	
Batch B196805 - SM21-22 4500 CL G										
Blank (B196805-BLK1)				Prepared & Analyzed: 02/13/18						
Chlorine, Residual	ND	0.020	mg/L							
LCS (B196805-BS1)				Prepared & Analyzed: 02/13/18						
Chlorine, Residual	1.2	0.020	mg/L	1.30		93.8	82.5-130			
LCS Dup (B196805-BSD1)				Prepared & Analyzed: 02/13/18						
Chlorine, Residual	1.2	0.020	mg/L	1.30		94.4	82.5-130	0.642	6.2	
Duplicate (B196805-DUP1)				Source: 18B0433-02		Prepared & Analyzed: 02/13/18				
Chlorine, Residual	ND	0.020	mg/L		ND			NC	44.8	
Matrix Spike (B196805-MS1)				Source: 18B0433-02		Prepared & Analyzed: 02/13/18				
Chlorine, Residual	1.0	0.020	mg/L	1.00	ND	100	10-182			
Batch B196838 - SM21-22 2510B Modified										
Blank (B196838-BLK1)				Prepared & Analyzed: 02/14/18						
Specific conductance	ND	2.0	µmhos/cm							

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QUALITY CONTROL
Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B196838 - SM21-22 2510B Modified										
LCS (B196838-BS1)				Prepared & Analyzed: 02/14/18						
Specific conductance	190		µmhos/cm	192		101	89.2-110			
Batch B196885 - SW-846 9014										
Blank (B196885-BLK1)				Prepared: 02/14/18 Analyzed: 02/15/18						
Reactive Cyanide	ND	0.40	mg/Kg							
LCS (B196885-BS1)				Prepared: 02/14/18 Analyzed: 02/15/18						
Reactive Cyanide	9.4	0.40	mg/Kg	10.0		94.4	85.9-110			
Batch B196886 - SW-846 9030A										
Blank (B196886-BLK1)				Prepared: 02/14/18 Analyzed: 02/15/18						
Reactive Sulfide	ND	2.0	mg/Kg							
LCS (B196886-BS1)				Prepared: 02/14/18 Analyzed: 02/15/18						
Reactive Sulfide	12	2.0	mg/Kg	14.8		81.1	64.5-120			
Batch B196908 - EPA 1664B										
Blank (B196908-BLK1)				Prepared & Analyzed: 02/15/18						
Silica Gel Treated HEM (SGT-HEM)	ND	1.4	mg/L							
LCS (B196908-BS1)				Prepared & Analyzed: 02/15/18						
Silica Gel Treated HEM (SGT-HEM)	11		mg/L	10.0		114	64-132			
Batch B196911 - SM21-22 2540D										
Blank (B196911-BLK1)				Prepared & Analyzed: 02/15/18						
Total Suspended Solids	ND	2.5	mg/L							
LCS (B196911-BS1)				Prepared & Analyzed: 02/15/18						
Total Suspended Solids	188	20	mg/L	200		94.0	66.7-117			

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QUALITY CONTROL
Drinking Water Organics EPA 504.1 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B196834 - EPA 504 water
Blank (B196834-BLK1)

Prepared & Analyzed: 02/14/18

1,2-Dibromoethane (EDB)	ND	0.021	µg/L							
1,2-Dibromoethane (EDB) [2C]	ND	0.021	µg/L							

LCS (B196834-BS1)

Prepared & Analyzed: 02/14/18

1,2-Dibromoethane (EDB)	0.155	0.020	µg/L	0.177		88.0	70-130			
1,2-Dibromoethane (EDB) [2C]	0.188	0.020	µg/L	0.177		106	70-130			

LCS Dup (B196834-BSD1)

Prepared & Analyzed: 02/14/18

1,2-Dibromoethane (EDB)	0.154	0.021	µg/L	0.181		85.1	70-130	0.907		
1,2-Dibromoethane (EDB) [2C]	0.194	0.021	µg/L	0.181		107	70-130	3.46		

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
DL-15	Sample required a dilution due to low internal standard recovery of the lesser diluted digestion, reporting limit is elevated.
J	[Undefined]
Ja	Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated concentration (CLP J-Flag).
L-04	Laboratory fortified blank/laboratory control sample recovery and duplicate recovery are outside of control limits. Reported value for this compound is likely to be biased on the low side.
L-07	Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.
L-14	Compound classified by MA CAM as difficult with acceptable recoveries of 40-160%. Recovery does not meet 70-130% criteria but does meet difficult compound criteria.
M-10	The reporting limit verification for the AIHA lead program is outside of control limits for this element. Any reported result at or near the detection limit may be biased on the high side.
O-32	A dilution was performed as part of the standard analytical procedure.
R-05	Laboratory fortified blank duplicate RPD is outside of control limits. Reduced precision is anticipated for any reported value for this compound.
V-04	Initial calibration did not meet method specifications. Compound was calibrated using a response factor where %RSD is outside of method specified criteria. Reported result is estimated.
V-05	Continuing calibration did not meet method specifications and was biased on the low side for this compound. Reported result is estimated.
V-06	Continuing calibration did not meet method specifications and was biased on the high side for this compound. Reported result is estimated.
V-16	Response factor is less than method specified minimum acceptable value. Reduced precision and accuracy may be associated with reported result.
V-19	Initial calibration did not meet method specifications. Compound was calibrated using linear regression with correlation coefficient <0.99. Reported result is estimated.
V-20	Continuing calibration did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.
V-34	Initial calibration verification (ICV) did not meet method specifications and was biased on the low side for this compound. Reported result is estimated.
Z-01	SM4500 test had a calibration point outside acceptable back calculated recovery. Reanalysis yielded similar non-conformance.

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>EPA 200.7 in Water</i>	
Iron	CT,MA,NH,NY,RI,NC,ME,VA
<i>EPA 200.8 in Water</i>	
Antimony	CT,MA,NH,NY,RI,NC,ME,VA
Arsenic	CT,MA,NH,NY,RI,NC,ME,VA
Cadmium	CT,MA,NH,NY,RI,NC,ME,VA
Chromium	CT,MA,NH,NY,RI,NC,ME,VA
Copper	CT,MA,NH,NY,RI,NC,ME,VA
Lead	CT,MA,NH,NY,RI,NC,ME,VA
Nickel	CT,MA,NH,NY,RI,NC,ME,VA
Selenium	CT,MA,NH,NY,RI,NC,ME,VA
Silver	CT,MA,NH,NY,RI,NC,ME,VA
Zinc	CT,MA,NH,NY,RI,NC,ME,VA
<i>EPA 245.1 in Water</i>	
Mercury	CT,MA,NH,RI,NY,NC,ME,VA
<i>EPA 300.0 in Water</i>	
Chloride	NC,NY,MA,VA,ME,NH,CT,RI
<i>EPA 608 in Water</i>	
Aroclor-1016	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1016 [2C]	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1221	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1221 [2C]	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1232	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1232 [2C]	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1242	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1242 [2C]	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1248	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1248 [2C]	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1254	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1254 [2C]	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1260	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1260 [2C]	CT,MA,NH,NY,RI,NC,ME,VA
<i>EPA 624 in Water</i>	
Acetone	NH,NY
Benzene	CT,MA,NH,NY,RI,NC,ME,VA
Bromodichloromethane	CT,MA,NH,NY,RI,NC,ME,VA
Bromoform	CT,MA,NH,NY,RI,NC,ME,VA
Bromomethane	CT,MA,NH,NY,RI,NC,ME,VA
Carbon Tetrachloride	CT,MA,NH,NY,RI,NC,ME,VA
Chlorobenzene	CT,MA,NH,NY,RI,NC,ME,VA
Chlorodibromomethane	CT,MA,NH,NY,RI,NC,ME,VA
Chloroethane	CT,MA,NH,NY,RI,NC,ME,VA
Chloroform	CT,MA,NH,NY,RI,NC,ME,VA
Chloromethane	CT,MA,NH,NY,RI,NC,ME,VA
1,2-Dichlorobenzene	CT,MA,NH,NY,RI,NC,ME,VA
1,3-Dichlorobenzene	CT,MA,NH,NY,RI,NC,ME,VA

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
EPA 624 in Water	
1,4-Dichlorobenzene	CT,MA,NH,NY,RI,NC,ME,VA
1,2-Dichloroethane	CT,MA,NH,NY,RI,NC,ME,VA
1,1-Dichloroethane	CT,MA,NH,NY,RI,NC,ME,VA
1,1-Dichloroethylene	CT,MA,NH,NY,RI,NC,ME,VA
trans-1,2-Dichloroethylene	CT,MA,NH,NY,RI,NC,ME,VA
1,2-Dichloropropane	CT,MA,NH,NY,RI,NC,ME,VA
cis-1,3-Dichloropropene	CT,MA,NH,NY,RI,NC,ME,VA
trans-1,3-Dichloropropene	CT,MA,NH,NY,RI,NC,ME,VA
Ethylbenzene	CT,MA,NH,NY,RI,NC,ME,VA
Methyl tert-Butyl Ether (MTBE)	NH,NY,NC
Methylene Chloride	CT,MA,NH,NY,RI,NC,ME,VA
Naphthalene	NC
1,1,2,2-Tetrachloroethane	CT,MA,NH,NY,RI,NC,ME,VA
Tetrachloroethylene	CT,MA,NH,NY,RI,NC,ME,VA
Toluene	CT,MA,NH,NY,RI,NC,ME,VA
1,2,4-Trichlorobenzene	NC
1,1,1-Trichloroethane	CT,MA,NH,NY,RI,NC,ME,VA
1,1,2-Trichloroethane	CT,MA,NH,NY,RI,NC,ME,VA
Trichloroethylene	CT,MA,NH,NY,RI,NC,ME,VA
Trichlorofluoromethane (Freon 11)	CT,MA,NH,NY,RI,NC,ME,VA
Vinyl Chloride	CT,MA,NH,NY,RI,NC,ME,VA
m+p Xylene	CT,MA,NH,NY,RI,NC,VA
o-Xylene	CT,MA,NH,NY,RI,NC,VA
EPA 625 in Water	
Acenaphthene	CT,MA,NH,NY,NC,RI,ME,VA
Acenaphthylene	CT,MA,NH,NY,NC,RI,ME,VA
Acetophenone	NY,NC
Anthracene	CT,MA,NH,NY,NC,RI,ME,VA
Aniline	NC
Benzidine	CT,MA,NH,NY,NC,RI,ME,VA
Benzo(a)anthracene	CT,MA,NH,NY,NC,RI,ME,VA
Benzo(a)pyrene	CT,MA,NH,NY,NC,RI,ME,VA
Benzo(b)fluoranthene	CT,MA,NH,NY,NC,RI,ME,VA
Benzo(g,h,i)perylene	CT,MA,NH,NY,NC,RI,ME,VA
Benzo(k)fluoranthene	CT,MA,NH,NY,NC,RI,ME,VA
4-Bromophenylphenylether	CT,MA,NH,NY,NC,RI,ME,VA
Butylbenzylphthalate	CT,MA,NH,NY,NC,RI,ME,VA
4-Chloro-3-methylphenol	CT,MA,NH,NY,NC,RI,VA
Bis(2-chloroethoxy)methane	CT,MA,NH,NY,NC,RI,ME,VA
Bis(2-chloroethyl)ether	CT,MA,NH,NY,NC,RI,ME,VA
Bis(2-chloroisopropyl)ether	CT,MA,NH,NY,NC,RI,ME,VA
2-Chloronaphthalene	CT,MA,NH,NY,NC,RI,ME,VA
2-Chlorophenol	CT,MA,NH,NY,NC,RI,ME,VA
4-Chlorophenylphenylether	CT,MA,NH,NY,NC,RI,ME,VA
Chrysene	CT,MA,NH,NY,NC,RI,ME,VA
4-Chloroaniline	NC

CERTIFICATIONS
Certified Analyses included in this Report

Analyte	Certifications
<i>EPA 625 in Water</i>	
Dibenz(a,h)anthracene	CT,MA,NH,NY,NC,RI,ME,VA
Di-n-butylphthalate	CT,MA,NH,NY,NC,RI,ME,VA
1,3-Dichlorobenzene	MA,NC
1,4-Dichlorobenzene	MA,NC
1,2-Dichlorobenzene	MA,NC
3,3-Dichlorobenzidine	CT,MA,NH,NY,NC,RI,ME,VA
2,4-Dichlorophenol	CT,MA,NH,NY,NC,RI,ME,VA
Dibenzofuran	NC
Diethylphthalate	CT,MA,NH,NY,NC,RI,ME,VA
2,4-Dimethylphenol	CT,MA,NH,NY,NC,RI,ME,VA
Dimethylphthalate	CT,MA,NH,NY,NC,RI,ME,VA
4,6-Dinitro-2-methylphenol	CT,MA,NH,NY,NC,RI,ME,VA
2,4-Dinitrophenol	CT,MA,NH,NY,NC,RI,ME,VA
2,4-Dinitrotoluene	CT,MA,NH,NY,NC,RI,ME,VA
2,6-Dinitrotoluene	CT,MA,NH,NY,NC,RI,ME,VA
Di-n-octylphthalate	CT,MA,NH,NY,NC,RI,ME,VA
1,2-Diphenylhydrazine (as Azobenzene)	NC
Bis(2-Ethylhexyl)phthalate	CT,MA,NH,NY,NC,RI,ME,VA
Fluoranthene	CT,MA,NH,NY,NC,RI,ME,VA
Fluorene	CT,MA,NH,NY,NC,RI,ME,VA
Hexachlorobenzene	CT,MA,NH,NY,NC,RI,ME,VA
Hexachlorobutadiene	CT,MA,NH,NY,NC,RI,ME,VA
Hexachlorocyclopentadiene	CT,MA,NH,NY,NC,RI,ME,VA
Hexachloroethane	CT,MA,NH,NY,NC,RI,ME,VA
Indeno(1,2,3-cd)pyrene	CT,MA,NH,NY,NC,RI,ME,VA
Isophorone	CT,MA,NH,NY,NC,RI,ME,VA
Naphthalene	CT,MA,NH,NY,NC,RI,ME,VA
Nitrobenzene	CT,MA,NH,NY,NC,RI,ME,VA
2-Nitrophenol	CT,MA,NH,NY,NC,RI,ME,VA
4-Nitrophenol	CT,MA,NH,NY,NC,RI,ME,VA
N-Nitrosodimethylamine	CT,MA,NH,NY,NC,RI,ME,VA
N-Nitrosodiphenylamine	CT,MA,NH,NY,NC,RI,ME,VA
N-Nitrosodi-n-propylamine	CT,MA,NH,NY,NC,RI,ME,VA
Pentachlorophenol	CT,MA,NH,NY,NC,RI,ME,VA
2-Methylnaphthalene	NC
Phenanthrene	CT,MA,NH,NY,NC,RI,ME,VA
2-Methylphenol	NY,NC
Phenol	CT,MA,NH,NY,NC,RI,ME,VA
3/4-Methylphenol	NY,NC
Pyrene	CT,MA,NH,NY,NC,RI,ME,VA
1,2,4-Trichlorobenzene	CT,MA,NH,NY,NC,RI,ME,VA
2,4,6-Trichlorophenol	CT,MA,NH,NY,NC,RI,ME,VA
2,4,5-Trichlorophenol	CT,MA,NH,NY,NC
2-Fluorophenol	NC
<i>MADEP-EPH-04-1.1 in Water</i>	
C9-C18 Aliphatics	CT,NC,ME,NH-P

CERTIFICATIONS
Certified Analyses included in this Report

Analyte	Certifications
<i>MADEP-EPH-04-1.1 in Water</i>	
C19-C36 Aliphatics	CT,NC,ME,NH-P
Unadjusted C11-C22 Aromatics	CT,NC,ME,NH-P
C11-C22 Aromatics	CT,NC,ME,NH-P
Acenaphthene	CT,NC,ME,NH-P
Acenaphthylene	CT,NC,ME,NH-P
Anthracene	CT,NC,ME,NH-P
Benzo(a)anthracene	CT,NC,ME,NH-P
Benzo(a)pyrene	CT,NC,ME,NH-P
Benzo(b)fluoranthene	CT,NC,ME,NH-P
Benzo(g,h,i)perylene	CT,NC,ME,NH-P
Benzo(k)fluoranthene	CT,NC,ME,NH-P
Chrysene	CT,NC,ME,NH-P
Dibenz(a,h)anthracene	CT,NC,ME,NH-P
Fluoranthene	CT,NC,ME,NH-P
Fluorene	CT,NC,ME
Indeno(1,2,3-cd)pyrene	CT,NC,ME,NH-P
2-Methylnaphthalene	CT,NC
Naphthalene	CT,NC,ME,NH-P
Phenanthrene	CT,NC,ME,NH-P
Pyrene	CT,NC,ME,NH-P
<i>SM19-22 4500 NH3 C in Water</i>	
Ammonia as N	NY,MA,CT,RI,VA,NC,ME
<i>SM21-22 2540D in Water</i>	
Total Suspended Solids	CT,MA,NH,NY,RI,NC,ME,VA
<i>SM21-22 3500 Cr B in Water</i>	
Hexavalent Chromium	NY,CT,NH,RI,ME,VA,NC
<i>SM21-22 4500 CL G in Water</i>	
Chlorine, Residual	CT,MA,RI,ME
<i>SM21-22 4500 CN E in Water</i>	
Cyanide	CT,MA,NH,NY,RI,NC,ME,VA
<i>SW-846 1030 in Soil</i>	
Ignitability	NY,NH,CT,NC,ME,VA
<i>SW-846 6010C-D in Soil</i>	
Arsenic	CT,NH,NY,ME,VA,NC
Barium	CT,NH,NY,ME,VA,NC
Cadmium	CT,NH,NY,ME,VA,NC
Chromium	CT,NH,NY,ME,VA,NC
Lead	CT,NH,NY,AIHA,ME,VA,NC
Selenium	CT,NH,NY,ME,VA,NC
Silver	CT,NH,NY,ME,VA,NC
<i>SW-846 7471B in Soil</i>	
Mercury	CT,NH,NY,NC,ME,VA
<i>SW-846 8015C in Water</i>	
Ethanol	NY

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8082A in Soil</i>	
Aroclor-1016	CT,NH,NY,NC,ME,VA
Aroclor-1016 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1221	CT,NH,NY,NC,ME,VA
Aroclor-1221 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1232	CT,NH,NY,NC,ME,VA
Aroclor-1232 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1242	CT,NH,NY,NC,ME,VA
Aroclor-1242 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1248	CT,NH,NY,NC,ME,VA
Aroclor-1248 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1254	CT,NH,NY,NC,ME,VA
Aroclor-1254 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1260	CT,NH,NY,NC,ME,VA
Aroclor-1260 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1262	NH,NY,NC,ME,VA
Aroclor-1262 [2C]	NH,NY,NC,ME,VA
Aroclor-1268	NH,NY,NC,ME,VA
Aroclor-1268 [2C]	NH,NY,NC,ME,VA
<i>SW-846 8260C in Soil</i>	
Acetone	CT,NH,NY,ME
Benzene	CT,NH,NY,ME
Bromobenzene	NH,NY,ME
Bromochloromethane	NH,NY,ME
Bromodichloromethane	CT,NH,NY,ME
Bromoform	CT,NH,NY,ME
Bromomethane	CT,NH,NY,ME
2-Butanone (MEK)	CT,NH,NY,ME
n-Butylbenzene	CT,NH,NY,ME
sec-Butylbenzene	CT,NH,NY,ME
tert-Butylbenzene	CT,NH,NY,ME
Carbon Disulfide	CT,NH,NY,ME
Carbon Tetrachloride	CT,NH,NY,ME
Chlorobenzene	CT,NH,NY,ME
Chlorodibromomethane	CT,NH,NY,ME
Chloroethane	CT,NH,NY,ME
Chloroform	CT,NH,NY,ME
Chloromethane	CT,NH,NY,ME
2-Chlorotoluene	CT,NH,NY,ME
4-Chlorotoluene	CT,NH,NY,ME
Dibromomethane	NH,NY,ME
1,2-Dichlorobenzene	CT,NH,NY,ME
1,3-Dichlorobenzene	CT,NH,NY,ME
1,4-Dichlorobenzene	CT,NH,NY,ME
Dichlorodifluoromethane (Freon 12)	NY,ME
1,1-Dichloroethane	CT,NH,NY,ME
1,2-Dichloroethane	CT,NH,NY,ME

CERTIFICATIONS
Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8260C in Soil</i>	
1,1-Dichloroethylene	CT,NH,NY,ME
cis-1,2-Dichloroethylene	CT,NH,NY,ME
trans-1,2-Dichloroethylene	CT,NH,NY,ME
1,2-Dichloropropane	CT,NH,NY,ME
1,3-Dichloropropane	NH,NY,ME
2,2-Dichloropropane	NH,NY,ME
1,1-Dichloropropene	NH,NY,ME
cis-1,3-Dichloropropene	CT,NH,NY,ME
trans-1,3-Dichloropropene	CT,NH,NY,ME
1,4-Dioxane	NY
Ethylbenzene	CT,NH,NY,ME
Hexachlorobutadiene	NH,NY,ME
2-Hexanone (MBK)	CT,NH,NY,ME
Isopropylbenzene (Cumene)	CT,NH,NY,ME
p-Isopropyltoluene (p-Cymene)	NH,NY
Methyl tert-Butyl Ether (MTBE)	NH,NY
Methylene Chloride	CT,NH,NY,ME
4-Methyl-2-pentanone (MIBK)	CT,NH,NY
Naphthalene	NH,NY,ME
n-Propylbenzene	NH,NY
Styrene	CT,NH,NY,ME
1,1,1,2-Tetrachloroethane	CT,NH,NY,ME
1,1,2,2-Tetrachloroethane	CT,NH,NY,ME
Tetrachloroethylene	CT,NH,NY,ME
Toluene	CT,NH,NY,ME
1,2,3-Trichlorobenzene	NY
1,2,4-Trichlorobenzene	NH,NY,ME
1,1,1-Trichloroethane	CT,NH,NY,ME
1,1,2-Trichloroethane	CT,NH,NY,ME
Trichloroethylene	CT,NH,NY,ME
Trichlorofluoromethane (Freon 11)	CT,NH,NY,ME
1,2,3-Trichloropropane	NH,NY,ME
1,2,4-Trimethylbenzene	CT,NH,NY,ME
1,3,5-Trimethylbenzene	CT,NH,NY,ME
Vinyl Chloride	CT,NH,NY,ME
m+p Xylene	CT,NH,NY,ME
o-Xylene	CT,NH,NY,ME
<i>SW-846 8270D in Soil</i>	
Acenaphthene	CT,NY,NH
Acenaphthylene	CT,NY,NH
Acetophenone	NY,NH
Aniline	NY,NH
Anthracene	CT,NY,NH
Benzo(a)anthracene	CT,NY,NH
Benzo(a)pyrene	CT,NY,NH
Benzo(b)fluoranthene	CT,NY,NH

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8270D in Soil</i>	
Benzo(g,h,i)perylene	CT,NY,NH
Benzo(k)fluoranthene	CT,NY,NH
Bis(2-chloroethoxy)methane	CT,NY,NH
Bis(2-chloroethyl)ether	CT,NY,NH
Bis(2-chloroisopropyl)ether	CT,NY,NH
Bis(2-Ethylhexyl)phthalate	CT,NY,NH
4-Bromophenylphenylether	CT,NY,NH
Butylbenzylphthalate	CT,NY,NH
4-Chloroaniline	CT,NY,NH
2-Chloronaphthalene	CT,NY,NH
2-Chlorophenol	CT,NY,NH
Chrysene	CT,NY,NH
Dibenz(a,h)anthracene	CT,NY,NH
Dibenzofuran	CT,NY,NH
Di-n-butylphthalate	CT,NY,NH
1,2-Dichlorobenzene	NY,NH
1,3-Dichlorobenzene	NY,NH
1,4-Dichlorobenzene	NY,NH
3,3-Dichlorobenzidine	CT,NY,NH
2,4-Dichlorophenol	CT,NY,NH
Diethylphthalate	CT,NY,NH
2,4-Dimethylphenol	CT,NY,NH
Dimethylphthalate	CT,NY,NH
2,4-Dinitrophenol	CT,NY,NH
2,4-Dinitrotoluene	CT,NY,NH
2,6-Dinitrotoluene	CT,NY,NH
Di-n-octylphthalate	CT,NY,NH
1,2-Diphenylhydrazine (as Azobenzene)	NY,NH
Fluoranthene	CT,NY,NH
Fluorene	NY,NH
Hexachlorobenzene	CT,NY,NH
Hexachlorobutadiene	CT,NY,NH
Hexachloroethane	CT,NY,NH
Indeno(1,2,3-cd)pyrene	CT,NY,NH
Isophorone	CT,NY,NH
2-Methylnaphthalene	CT,NY,NH
2-Methylphenol	CT,NY,NH
3/4-Methylphenol	CT,NY,NH
Naphthalene	CT,NY,NH
Nitrobenzene	CT,NY,NH
2-Nitrophenol	CT,NY,NH
4-Nitrophenol	CT,NY,NH
Pentachlorophenol	CT,NY,NH
Phenanthrene	CT,NY,NH
Phenol	CT,NY,NH
Pyrene	CT,NY,NH
1,2,4-Trichlorobenzene	CT,NY,NH

CERTIFICATIONS
Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8270D in Soil</i>	
2,4,5-Trichlorophenol	CT,NY,NH
2,4,6-Trichlorophenol	CT,NY,NH
<i>SW-846 8270D in Water</i>	
Acenaphthene	CT,NY,NC,ME,NH,VA,NJ
Acenaphthylene	CT,NY,NC,ME,NH,VA,NJ
Acetophenone	NY,NC
Aniline	CT,NY,NC,ME,VA,NJ
Anthracene	CT,NY,NC,ME,NH,VA,NJ
Benzidine	CT,NY,NC,ME,NH,VA,NJ
Benzo(a)anthracene	CT,NY,NC,ME,NH,VA,NJ
Benzo(a)pyrene	CT,NY,NC,ME,NH,VA,NJ
Benzo(b)fluoranthene	CT,NY,NC,ME,NH,VA,NJ
Benzo(g,h,i)perylene	CT,NY,NC,ME,NH,VA,NJ
Benzo(k)fluoranthene	CT,NY,NC,ME,NH,VA,NJ
Bis(2-chloroethoxy)methane	CT,NY,NC,ME,NH,VA,NJ
Bis(2-chloroethyl)ether	CT,NY,NC,ME,NH,VA,NJ
Bis(2-chloroisopropyl)ether	CT,NY,NC,ME,NH,VA,NJ
Bis(2-Ethylhexyl)phthalate	CT,NY,NC,ME,NH,VA,NJ
4-Bromophenylphenylether	CT,NY,NC,ME,NH,VA,NJ
Butylbenzylphthalate	CT,NY,NC,ME,NH,VA,NJ
4-Chloroaniline	CT,NY,NC,ME,NH,VA,NJ
4-Chloro-3-methylphenol	CT,NY,NC,ME,NH,VA,NJ
2-Chloronaphthalene	CT,NY,NC,ME,NH,VA,NJ
2-Chlorophenol	CT,NY,NC,ME,NH,VA,NJ
4-Chlorophenylphenylether	CT,NY,NC,ME,NH,VA,NJ
Chrysene	CT,NY,NC,ME,NH,VA,NJ
Dibenz(a,h)anthracene	CT,NY,NC,ME,NH,VA,NJ
Dibenzofuran	CT,NY,NC,ME,NH,VA,NJ
Di-n-butylphthalate	CT,NY,NC,ME,NH,VA,NJ
1,2-Dichlorobenzene	CT,NY,NC,ME,NH,VA,NJ
1,3-Dichlorobenzene	CT,NY,NC,ME,NH,VA,NJ
1,4-Dichlorobenzene	CT,NY,NC,ME,NH,VA,NJ
3,3-Dichlorobenzidine	CT,NY,NC,ME,NH,VA,NJ
2,4-Dichlorophenol	CT,NY,NC,ME,NH,VA,NJ
Diethylphthalate	CT,NY,NC,ME,NH,VA,NJ
2,4-Dimethylphenol	CT,NY,NC,ME,NH,VA,NJ
Dimethylphthalate	CT,NY,NC,ME,NH,VA,NJ
4,6-Dinitro-2-methylphenol	CT,NY,NC,ME,NH,VA,NJ
2,4-Dinitrophenol	CT,NY,NC,ME,NH,VA,NJ
2,4-Dinitrotoluene	CT,NY,NC,ME,NH,VA,NJ
2,6-Dinitrotoluene	CT,NY,NC,ME,NH,VA,NJ
Di-n-octylphthalate	CT,NY,NC,ME,NH,VA,NJ
1,2-Diphenylhydrazine (as Azobenzene)	NY,NC,ME
Fluoranthene	CT,NY,NC,ME,NH,VA,NJ
Fluorene	NY,NC,ME,NH,VA,NJ
Hexachlorobenzene	CT,NY,NC,ME,NH,VA,NJ

CERTIFICATIONS
Certified Analyses included in this Report

Analyte	Certifications
SW-846 8270D in Water	
Hexachlorobutadiene	CT,NY,NC,ME,NH,VA,NJ
Hexachlorocyclopentadiene	CT,NY,NC,ME,NH,VA,NJ
Hexachloroethane	CT,NY,NC,ME,NH,VA,NJ
Indeno(1,2,3-cd)pyrene	CT,NY,NC,ME,NH,VA,NJ
Isophorone	CT,NY,NC,ME,NH,VA,NJ
2-Methylnaphthalene	CT,NY,NC,ME,NH,VA,NJ
2-Methylphenol	CT,NY,NC,NH,VA,NJ
3/4-Methylphenol	CT,NY,NC,NH,VA,NJ
Naphthalene	CT,NY,NC,ME,NH,VA,NJ
Nitrobenzene	CT,NY,NC,ME,NH,VA,NJ
2-Nitrophenol	CT,NY,NC,ME,NH,VA,NJ
4-Nitrophenol	CT,NY,NC,ME,NH,VA,NJ
N-Nitrosodimethylamine	CT,NY,NC,ME,NH,VA,NJ
N-Nitrosodiphenylamine	CT,NY,NC,ME,NH,VA,NJ
N-Nitrosodi-n-propylamine	CT,NY,NC,ME,NH,VA,NJ
Pentachlorophenol	CT,NY,NC,ME,NH,VA,NJ
Phenanthrene	CT,NY,NC,ME,NH,VA,NJ
Phenol	CT,NY,NC,ME,NH,VA,NJ
Pyrene	CT,NY,NC,ME,NH,VA,NJ
1,2,4-Trichlorobenzene	CT,NY,NC,ME,NH,VA,NJ
2,4,5-Trichlorophenol	CT,NY,NC,ME,NH,VA,NJ
2,4,6-Trichlorophenol	CT,NY,NC,ME,NH,VA,NJ
2-Fluorophenol	NC,VA
Phenol-d6	VA
Nitrobenzene-d5	VA

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2005	100033	03/1/2018
MA	Massachusetts DEP	M-MA100	06/30/2018
CT	Connecticut Department of Public Health	PH-0567	09/30/2019
NY	New York State Department of Health	10899 NELAP	04/1/2018
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2019
RI	Rhode Island Department of Health	LAO00112	12/30/2018
NC	North Carolina Div. of Water Quality	652	12/31/2018
NJ	New Jersey DEP	MA007 NELAP	06/30/2018
FL	Florida Department of Health	E871027 NELAP	06/30/2018
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2018
ME	State of Maine	2011028	06/9/2019
VA	Commonwealth of Virginia	460217	12/14/2018
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2018
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2018
NC-DW	North Carolina Department of Health	25703	07/31/2018


con-test®
 ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

Login Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False Statement will be brought to the attention of the Client - State True or False
Client Lightship EngineeringReceived By A.F.Date 2/13/18Time 1840
 How were the samples received? In Cooler T No Cooler On Ice T No Ice
 Direct from Sampling Ambient Melted Ice

 Were samples within Temperature? 2-6°C T By Gun # 577 Actual Temp - 3.4
 By Blank # Actual Temp -
Was Custody Seal Intact? N/A Were Samples Tampered with? N/AWas COC Relinquished? T Does Chain Agree With Samples? TAre there broken/leaking/loose caps on any samples? FIs COC in ink/ Legible? T Were samples received within holding time? T
 Did COC include all pertinent Information? Client T Analysis T Sampler Name T
 Project T ID's T Collection Dates/Times T
Are Sample labels filled out and legible? TAre there Lab to Filters? N/A Who was notified? Are there Rushes? T Who was notified? BrieAre there Short Holds? T Who was notified? LUKEIs there enough Volume? TIs there Headspace where applicable? TProper Media/Containers Used? TWere trip blanks received? N/A MS/MSD? N/ADo all samples have the proper pH? Is splitting samples required? N/AOn COC? N/A Acid T Base T

Vials	#	Containers:	#	#	#	#
Unp-		1 Liter Amb.	9	1 Liter Plastic	1	16 oz Amb.
HCL-	6	500 mL Amb.		500 mL Plastic	2	8oz Amb/Clear
Meoh-	1	250 mL Amb.		250 mL Plastic	2	4oz Amb/Clear
Bisulfate-	2	Col./Bacteria		Flashpoint		2oz Amb/Clear
DI-		Other Plastic		Other Glass		Encore
Thiosulfate-	3	SOC Kit		Plastic Bag		Frozen:
Sulfuric-		Perchlorate		Ziplock		

Unused Media

Vials	#	Containers:	#	#	#	#
Unp-		1 Liter Amb.		1 Liter Plastic		16 oz Amb.
HCL-		500 mL Amb.		500 mL Plastic		8oz Amb/Clear
Meoh-		250 mL Amb.		250 mL Plastic		4oz Amb/Clear
Bisulfate-		Col./Bacteria		Flashpoint		2oz Amb/Clear
DI-		Other Plastic		Other Glass		Encore
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:
Sulfuric-		Perchlorate		Ziplock		

Comments:

MADEP MCP Analytical Method Report Certification Form

Laboratory Name: Con-Test Analytical Laboratory				Project #: 18B0433	
Project Location: South Boston, MA				RTN:	
This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)] 18B0433-01 thru 18B0433-02					
Matrices: Soil		Water			
CAM Protocol (check all that below)					
8260 VOC CAM II A (X)	7470/7471 Hg CAM IIIB (X)	MassDEP VPH CAM IV A ()	8081 Pesticides CAM V B ()	7196 Hex Cr CAM VI B ()	MassDEP APH CAM IX A ()
8270 SVOC CAM II B (X)	7010 Metals CAM III C ()	MassDEP EPH CAM IV A (X)	8151 Herbicides CAM V C ()	8330 Explosives CAM VIII A ()	TO-15 VOC CAM IX B ()
6010 Metals CAM III A (X)	6020 Metals CAM III D ()	8082 PCB CAM V A (X)	9014 Total Cyanide/PAC CAM VI A ()	6860 Perchlorate CAM VIII B ()	
Affirmative response to Questions A through F is required for "Presumptive Certainty" status					
A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?				☒ Yes ☐ No ¹
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?				☒ Yes ☐ No ¹
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?				☒ Yes ☐ No ¹
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data?				☒ Yes ☐ No ¹
E a	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).				☐ Yes ☐ No ¹
E b	APH and TO-15 Methods only: Was the complete analyte list reported for each method?				☐ Yes ☐ No ¹
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all No responses to Questions A through E)?				☐ Yes ☒ No ¹
A response to questions G, H and I below is required for "Presumptive Certainty" status					
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?				☒ Yes ☐ No ¹
Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.					
H	Were all QC performance standards specified in the CAM protocol(s) achieved?				☐ Yes ☒ No ¹
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?				☐ Yes ☒ No ¹
¹ All Negative responses must be addressed in an attached Environmental Laboratory case narrative.					
I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.					
Signature: _____ 		Position: Project Manager			
Printed Name: Lisa A. Worthington		Date: 02/19/18			

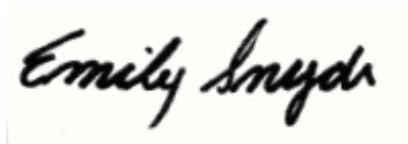
February 19, 2018

Kevin Paradise
Lightship Engineering, LLC
39 Industrial Park Road
Plymouth, MA 02360

Project Location: South Boston, MA
Client Job Number:
Project Number: 500.98.12
Laboratory Work Order Number: 18B0481

Enclosed are results of analyses for samples received by the laboratory on February 13, 2018. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Emily Snyder". The signature is written in a cursive, flowing style.

Emily E. Snyder
Project Manager

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Lightship Engineering, LLC
39 Industrial Park Road
Plymouth, MA 02360
ATTN: Kevin Paradise

REPORT DATE: 2/19/2018

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 500.98.12

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 18B0481

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: South Boston, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
LE-WC27	18B0481-01	Soil		SM 2540G SM21-22 2510B Modified SW-846 1030 SW-846 6010C-D SW-846 7471B SW-846 8082A SW-846 8100 Modified SW-846 8260C SW-846 8270D SW-846 9014 SW-846 9030A SW-846 9045C	
LE-WC28	18B0481-02	Soil		SM 2540G SM21-22 2510B Modified SW-846 1030 SW-846 6010C-D SW-846 7471B SW-846 8082A SW-846 8100 Modified SW-846 8260C SW-846 8270D SW-846 9014 SW-846 9030A SW-846 9045C	

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Lightship Engineering, LLC
39 Industrial Park Road
Plymouth, MA 02360
ATTN: Kevin Paradise

REPORT DATE: 2/19/2018

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 500.98.12

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 18B0481

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: South Boston, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
LE-TMW4	18B0481-03	Ground Water		EPA 1664B	NY11393/MA-MAI138/M A1110
				EPA 200.7	
				EPA 200.8	
				EPA 245.1	
				EPA 300.0	
				EPA 504.1	
				EPA 608	
				EPA 624	
				EPA 625	
				MADEP-EPH-04-1.1	
				SM19-22 4500 NH3 C	MA M-MA-086/CT PH-0574/NY11148
				SM21-22 2540D	
				SM21-22 3500 Cr B	
				SM21-22 4500 CL G	
				SM21-22 4500 CN E	
				SW-846 8015C	
				SW-846 8270D	
				Tri Chrome Calc.	
				EPA 1664B	
				EPA 200.7	
LE-TMW5	18B0481-04	Ground Water		EPA 200.8	NY11393/MA-MAI138/M A1110
				EPA 245.1	
				EPA 300.0	
				EPA 504.1	
				EPA 608	
				EPA 624	
				EPA 625	
				MADEP-EPH-04-1.1	
				SM19-22 4500 NH3 C	MA M-MA-086/CT PH-0574/NY11148
				SM21-22 2540D	
				SM21-22 3500 Cr B	
				SM21-22 4500 CL G	
				SM21-22 4500 CN E	
				SW-846 8015C	
				SW-846 8270D	
				Tri Chrome Calc.	
				EPA 1664B	
				EPA 200.7	

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

For method 6010, only RCRA 8 metals were requested and reported.

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EPA 200.8**Qualifications:****DL-15**

Sample required a dilution due to low internal standard recovery of the lesser diluted digestion, reporting limit is elevated.

Analyte & Samples(s) Qualified:**Antimony**

18B0481-03[LE-TMW4], B196822-DUP1

Arsenic

18B0481-03[LE-TMW4], B196822-DUP1

Cadmium

18B0481-03[LE-TMW4], B196822-DUP1

Chromium

18B0481-03[LE-TMW4], B196822-DUP1

Copper

18B0481-03[LE-TMW4], B196822-DUP1

Lead

18B0481-03[LE-TMW4], B196822-DUP1

Nickel

18B0481-03[LE-TMW4], B196822-DUP1

Selenium

18B0481-03[LE-TMW4], B196822-DUP1

Silver

18B0481-03[LE-TMW4], B196822-DUP1

Zinc

18B0481-03[LE-TMW4], B196822-DUP1

EPA 625**Qualifications:****L-07**

Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.

Analyte & Samples(s) Qualified:**N-Nitrosodimethylamine**

B196705-BSD1

V-04

Initial calibration did not meet method specifications. Compound was calibrated using a response factor where %RSD is outside of method specified criteria. Reported result is estimated.

Analyte & Samples(s) Qualified:**2,4-Dinitrophenol**

B196705-BLK1, B196705-BB1, B196705-BSD1

Benzidine

18B0481-03[LE-TMW4], 18B0481-04[LE-TMW5]

V-05

Continuing calibration did not meet method specifications and was biased on the low side for this compound. Reported result is estimated.

Analyte & Samples(s) Qualified:**Benzidine**

18B0481-03[LE-TMW4], 18B0481-04[LE-TMW5], B196705-BLK1, B196705-BB1, B196705-BSD1

V-19

Initial calibration did not meet method specifications. Compound was calibrated using linear regression with correlation coefficient <0.99. Reported result is estimated.

Analyte & Samples(s) Qualified:**Hexachlorocyclopentadiene**

B196705-BLK1, B196705-BB1, B196705-BSD1

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V-20

Continuing calibration did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

Analyte & Samples(s) Qualified:**2,4-Dinitrophenol**

18B0481-03[LE-TMW4], 18B0481-04[LE-TMW5]

Benzo(g,h,i)perylene

B196705-BLK1, B196705-BS1, B196705-BSD1

Bis(2-Ethylhexyl)phthalate

B196705-BLK1, B196705-BS1, B196705-BSD1

Dimethylphthalate

B196705-BLK1, B196705-BS1, B196705-BSD1

Di-n-butylphthalate

B196705-BLK1, B196705-BS1, B196705-BSD1

Di-n-octylphthalate

B196705-BLK1, B196705-BS1, B196705-BSD1

Hexachlorobutadiene

18B0481-03[LE-TMW4], 18B0481-04[LE-TMW5]

V-34

Initial calibration verification (ICV) did not meet method specifications and was biased on the low side for this compound. Reported result is estimated.

Analyte & Samples(s) Qualified:**3,3-Dichlorobenzidine**

18B0481-03[LE-TMW4], 18B0481-04[LE-TMW5], B196705-BLK1, B196705-BS1, B196705-BSD1

SM21-22 4500 CL G**Qualifications:****Z-01**

SM4500 test had a calibration point outside acceptable back calculated recovery. Reanalysis yielded similar non-conformance.

Analyte & Samples(s) Qualified:**Chlorine, Residual**

18B0481-03[LE-TMW4]

SW-846 6010C-D**Qualifications:****M-10**

The reporting limit verification for the AIHA lead program is outside of control limits for this element. Any reported result at or near the detection limit may be biased on the high side.

Analyte & Samples(s) Qualified:**Lead**

18B0481-01[LE-WC27], 18B0481-02[LE-WC28], B196818-MRL1

SW-846 7471B**Qualifications:****L-07**

Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.

Analyte & Samples(s) Qualified:**Mercury**

B196773-BS1

SW-846 8082A**Qualifications:****O-32**

A dilution was performed as part of the standard analytical procedure.

Analyte & Samples(s) Qualified:

18B0481-01[LE-WC27], 18B0481-02[LE-WC28]

SW-846 8260C**Qualifications:**

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L-04

Laboratory fortified blank/laboratory control sample recovery and duplicate recovery are outside of control limits. Reported value for this compound is likely to be biased on the low side.

Analyte & Samples(s) Qualified:**2,2-Dichloropropane**

18B0481-01[LE-WC27], 18B0481-02[LE-WC28], B196829-BLK1, B196829-BS1, B196829-BSD1

R-05

Laboratory fortified blank duplicate RPD is outside of control limits. Reduced precision is anticipated for any reported value for this compound.

Analyte & Samples(s) Qualified:**Bromomethane**

18B0481-01[LE-WC27], 18B0481-02[LE-WC28], B196829-BLK1, B196829-BS1, B196829-BSD1

V-05

Continuing calibration did not meet method specifications and was biased on the low side for this compound. Reported result is estimated.

Analyte & Samples(s) Qualified:**2,2-Dichloropropane**

18B0481-01[LE-WC27], 18B0481-02[LE-WC28], B196829-BLK1, B196829-BS1, B196829-BSD1

Dichlorodifluoromethane (Freon 1:

18B0481-01[LE-WC27], 18B0481-02[LE-WC28], B196829-BLK1, B196829-BS1, B196829-BSD1

V-16

Response factor is less than method specified minimum acceptable value. Reduced precision and accuracy may be associated with reported result.

Analyte & Samples(s) Qualified:**1,4-Dioxane**

18B0481-01[LE-WC27], 18B0481-02[LE-WC28], B196829-BLK1, B196829-BS1, B196829-BSD1

V-20

Continuing calibration did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

Analyte & Samples(s) Qualified:**1,1,2,2-Tetrachloroethane**

B196829-BS1, B196829-BSD1

1,2,3-Trichloropropane

B196829-BS1, B196829-BSD1

V-34

Initial calibration verification (ICV) did not meet method specifications and was biased on the low side for this compound. Reported result is estimated.

Analyte & Samples(s) Qualified:**Bromomethane**

18B0481-01[LE-WC27], 18B0481-02[LE-WC28], B196829-BLK1, B196829-BS1, B196829-BSD1

SW-846 8270D

Qualifications:

Ja

Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated concentration (CLP J-Flag).

Analyte & Samples(s) Qualified:**Bis(2-Ethylhexyl)phthalate**

18B0481-03[LE-TMW4], B196787-BLK1

Pentachlorophenol

18B0481-04[LE-TMW5]

L-04

Laboratory fortified blank/laboratory control sample recovery and duplicate recovery are outside of control limits. Reported value for this compound is likely to be biased on the low side.

Analyte & Samples(s) Qualified:**Aniline**

18B0481-01[LE-WC27], 18B0481-02[LE-WC28], B196704-BLK1, B196704-BS1, B196704-BSD1

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L-07

Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.

Analyte & Samples(s) Qualified:**2,4-Dinitrophenol**B196704-BSD1

R-05

Laboratory fortified blank duplicate RPD is outside of control limits. Reduced precision is anticipated for any reported value for this compound.

Analyte & Samples(s) Qualified:**Benzo(g,h,i)perylene**

18B0481-01[LE-WC27], 18B0481-02[LE-WC28], B196704-BLK1, B196704-BS1, B196704-BSD1

Butylbenzylphthalate

18B0481-01[LE-WC27], 18B0481-02[LE-WC28], B196704-BLK1, B196704-BS1, B196704-BSD1

Pyrene18B0481-01[LE-WC27], 18B0481-02[LE-WC28], B196704-BLK1, B196704-BS1, B196704-BSD1

V-04

Initial calibration did not meet method specifications. Compound was calibrated using a response factor where %RSD is outside of method specified criteria. Reported result is estimated.

Analyte & Samples(s) Qualified:**2,4-Dinitrophenol**B196704-BLK1, B196704-BS1, B196704-BSD1

V-05

Continuing calibration did not meet method specifications and was biased on the low side for this compound. Reported result is estimated.

Analyte & Samples(s) Qualified:**Aniline**18B0481-01[LE-WC27], 18B0481-02[LE-WC28]

V-06

Continuing calibration did not meet method specifications and was biased on the high side for this compound. Reported result is estimated.

Analyte & Samples(s) Qualified:**Benzo(g,h,i)perylene**

B196704-BS1, B196704-BSD1

Dimethylphthalate

B196704-BS1, B196704-BSD1

Di-n-butylphthalate

B196704-BS1, B196704-BSD1

Di-n-octylphthalateB196704-BS1, B196704-BSD1

V-20

Continuing calibration did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

Analyte & Samples(s) Qualified:**2,4-Dinitrophenol**

18B0481-01[LE-WC27], 18B0481-02[LE-WC28]

Benzo(g,h,i)perylene

B196704-BLK1

Dimethylphthalate

B196704-BLK1

Di-n-butylphthalate

B196704-BLK1

Di-n-octylphthalate

B196704-BLK1

Hexachlorobutadiene

18B0481-01[LE-WC27], 18B0481-02[LE-WC28]

V-34

Initial calibration verification (ICV) did not meet method specifications and was biased on the low side for this compound. Reported result is estimated.

Analyte & Samples(s) Qualified:**3,3-Dichlorobenzidine**

18B0481-01[LE-WC27], 18B0481-02[LE-WC28], B196704-BLK1, B196704-BS1, B196704-BSD1

4-Chloroaniline

18B0481-01[LE-WC27], 18B0481-02[LE-WC28], B196704-BLK1, B196704-BS1, B196704-BSD1

Aniline

B196704-BLK1, B196704-BS1, B196704-BSD1

MADEP-EPH-04-1.1

SPE cartridge contamination with non-petroleum compounds, if present, is verified by GC/MS in each method blank per extraction batch and excluded from C11-C22 aromatic range fraction in all samples in the batch. No significant modifications were made to the method.

SW-846 6010C/D SW-846 6020A/B

For NC, Metals methods SW-846 6010D and SW-846 6020B are followed, and for all other states methods SW-846 6010C and SW-846 6020A are followed.

SW-846 8100 Modified

TPH (C9-C36) is quantitated against a calibration made with a diesel standard.

SW-846 8260C

Laboratory control sample recoveries for required MCP Data Enhancement 8260 compounds were all within limits specified by the method except for "difficult analytes" where recovery control limits of 40-160% are used and/or unless otherwise listed in this narrative. Difficult analytes: MIBK, MEK, acetone, 1,4-dioxane, chloromethane, dichlorodifluoromethane, 2-hexanone, and bromomethane.

SW-846 8270D

Laboratory control sample recoveries for required MCP Data Enhancement 8270 compounds were all within control limits specified by the method, 40-140% for base/neutrals and 30-130% for acids except for "difficult analytes" listed below and/or otherwise listed in this narrative. Difficult analytes limits are 15 and 140%: 2,4-dinitrophenol, 4-chloroaniline, 4-nitrophenol, and phenol.

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Lisa A. Worthington
Project Manager

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: South Boston, MA

Sample Description:

Work Order: 18B0481

Date Received: 2/13/2018

Field Sample #: LE-TMW4

Sampled: 2/13/2018 12:30

Sample ID: 18B0481-03

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	50	9.7	µg/L	1		EPA 624	2/14/18	2/14/18 8:35	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.50	0.11	µg/L	1		EPA 624	2/14/18	2/14/18 8:35	MFF
Benzene	ND	1.0	0.12	µg/L	1		EPA 624	2/14/18	2/14/18 8:35	MFF
Bromodichloromethane	ND	2.0	0.30	µg/L	1		EPA 624	2/14/18	2/14/18 8:35	MFF
Bromoform	ND	2.0	0.21	µg/L	1		EPA 624	2/14/18	2/14/18 8:35	MFF
Bromomethane	ND	5.0	0.94	µg/L	1		EPA 624	2/14/18	2/14/18 8:35	MFF
tert-Butyl Alcohol (TBA)	ND	20	2.2	µg/L	1		EPA 624	2/14/18	2/14/18 8:35	MFF
Carbon Tetrachloride	ND	2.0	0.25	µg/L	1		EPA 624	2/14/18	2/14/18 8:35	MFF
Chlorobenzene	ND	2.0	0.16	µg/L	1		EPA 624	2/14/18	2/14/18 8:35	MFF
Chlorodibromomethane	ND	2.0	0.10	µg/L	1		EPA 624	2/14/18	2/14/18 8:35	MFF
Chloroethane	ND	2.0	0.28	µg/L	1		EPA 624	2/14/18	2/14/18 8:35	MFF
Chloroform	ND	2.0	0.22	µg/L	1		EPA 624	2/14/18	2/14/18 8:35	MFF
Chloromethane	ND	2.0	0.55	µg/L	1		EPA 624	2/14/18	2/14/18 8:35	MFF
1,2-Dichlorobenzene	ND	2.0	0.17	µg/L	1		EPA 624	2/14/18	2/14/18 8:35	MFF
1,3-Dichlorobenzene	ND	2.0	0.17	µg/L	1		EPA 624	2/14/18	2/14/18 8:35	MFF
1,4-Dichlorobenzene	ND	2.0	0.15	µg/L	1		EPA 624	2/14/18	2/14/18 8:35	MFF
1,2-Dichloroethane	ND	2.0	0.19	µg/L	1		EPA 624	2/14/18	2/14/18 8:35	MFF
1,1-Dichloroethane	ND	2.0	0.16	µg/L	1		EPA 624	2/14/18	2/14/18 8:35	MFF
1,1-Dichloroethylene	ND	2.0	0.21	µg/L	1		EPA 624	2/14/18	2/14/18 8:35	MFF
trans-1,2-Dichloroethylene	ND	2.0	0.15	µg/L	1		EPA 624	2/14/18	2/14/18 8:35	MFF
1,2-Dichloropropane	ND	2.0	0.13	µg/L	1		EPA 624	2/14/18	2/14/18 8:35	MFF
cis-1,3-Dichloropropene	ND	2.0	0.12	µg/L	1		EPA 624	2/14/18	2/14/18 8:35	MFF
1,4-Dioxane	ND	50	26	µg/L	1		EPA 624	2/14/18	2/14/18 8:35	MFF
trans-1,3-Dichloropropene	ND	2.0	0.11	µg/L	1		EPA 624	2/14/18	2/14/18 8:35	MFF
Ethylbenzene	ND	2.0	0.13	µg/L	1		EPA 624	2/14/18	2/14/18 8:35	MFF
Methyl tert-Butyl Ether (MTBE)	ND	2.0	0.090	µg/L	1		EPA 624	2/14/18	2/14/18 8:35	MFF
Methylene Chloride	ND	5.0	3.2	µg/L	1		EPA 624	2/14/18	2/14/18 8:35	MFF
1,1,2,2-Tetrachloroethane	ND	2.0	0.16	µg/L	1		EPA 624	2/14/18	2/14/18 8:35	MFF
Tetrachloroethylene	ND	2.0	0.27	µg/L	1		EPA 624	2/14/18	2/14/18 8:35	MFF
Toluene	ND	1.0	0.17	µg/L	1		EPA 624	2/14/18	2/14/18 8:35	MFF
1,1,1-Trichloroethane	ND	2.0	0.13	µg/L	1		EPA 624	2/14/18	2/14/18 8:35	MFF
1,1,2-Trichloroethane	ND	2.0	0.24	µg/L	1		EPA 624	2/14/18	2/14/18 8:35	MFF
Trichloroethylene	ND	2.0	0.20	µg/L	1		EPA 624	2/14/18	2/14/18 8:35	MFF
Trichlorofluoromethane (Freon 11)	ND	2.0	0.15	µg/L	1		EPA 624	2/14/18	2/14/18 8:35	MFF
Vinyl Chloride	ND	2.0	0.13	µg/L	1		EPA 624	2/14/18	2/14/18 8:35	MFF
m+p Xylene	ND	2.0	0.26	µg/L	1		EPA 624	2/14/18	2/14/18 8:35	MFF
o-Xylene	ND	2.0	0.13	µg/L	1		EPA 624	2/14/18	2/14/18 8:35	MFF
Surrogates	% Recovery		Recovery Limits		Flag/Qual					
1,2-Dichloroethane-d4	98.7		70-130				2/14/18 8:35			
Toluene-d8	99.3		70-130				2/14/18 8:35			
4-Bromofluorobenzene	93.0		70-130				2/14/18 8:35			

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Project Location: South Boston, MA

Sample Description:

Work Order: 18B0481

Date Received: 2/13/2018

Field Sample #: LE-TMW4

Sampled: 2/13/2018 12:30

Sample ID: 18B0481-03

Sample Matrix: Ground Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Benzo(a)anthracene	0.11	0.053	0.053	µg/L	1		SW-846 8270D	2/13/18	2/15/18 13:07	CJM
Benzo(a)pyrene	ND	0.11	0.11	µg/L	1		SW-846 8270D	2/13/18	2/15/18 13:07	CJM
Benzo(b)fluoranthene	0.11	0.053	0.053	µg/L	1		SW-846 8270D	2/13/18	2/15/18 13:07	CJM
Benzo(k)fluoranthene	ND	0.21	0.21	µg/L	1		SW-846 8270D	2/13/18	2/15/18 13:07	CJM
Bis(2-Ethylhexyl)phthalate	0.94	1.1	0.11	µg/L	1	Ja	SW-846 8270D	2/13/18	2/15/18 13:07	CJM
Chrysene	ND	0.21	0.21	µg/L	1		SW-846 8270D	2/13/18	2/15/18 13:07	CJM
Dibenz(a,h)anthracene	ND	0.21	0.21	µg/L	1		SW-846 8270D	2/13/18	2/15/18 13:07	CJM
Indeno(1,2,3-cd)pyrene	ND	0.21	0.21	µg/L	1		SW-846 8270D	2/13/18	2/15/18 13:07	CJM
Pentachlorophenol	ND	1.1	0.36	µg/L	1		SW-846 8270D	2/13/18	2/15/18 13:07	CJM
Surrogates	% Recovery		Recovery Limits		Flag/Qual					
2-Fluorophenol	39.2		15-110				2/15/18 13:07			
Phenol-d6	32.7		15-110				2/15/18 13:07			
Nitrobenzene-d5	76.0		30-130				2/15/18 13:07			
2-Fluorobiphenyl	75.8		30-130				2/15/18 13:07			
2,4,6-Tribromophenol	62.8		15-110				2/15/18 13:07			
p-Terphenyl-d14	61.0		30-130				2/15/18 13:07			

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: South Boston, MA

Sample Description:

Work Order: 18B0481

Date Received: 2/13/2018

Field Sample #: LE-TMW4

Sampled: 2/13/2018 12:30

Sample ID: 18B0481-03

Sample Matrix: Ground Water

Semivolatile Organic Compounds by - GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	5.3	µg/L	1		EPA 625	2/13/18	2/14/18 13:29	BGL
Acenaphthylene	ND	5.3	µg/L	1		EPA 625	2/13/18	2/14/18 13:29	BGL
Anthracene	ND	5.3	µg/L	1		EPA 625	2/13/18	2/14/18 13:29	BGL
Benzidine	ND	21	µg/L	1	V-04, V-05	EPA 625	2/13/18	2/14/18 13:29	BGL
Benzo(g,h,i)perylene	ND	5.3	µg/L	1		EPA 625	2/13/18	2/14/18 13:29	BGL
4-Bromophenylphenylether	ND	11	µg/L	1		EPA 625	2/13/18	2/14/18 13:29	BGL
Butylbenzylphthalate	ND	11	µg/L	1		EPA 625	2/13/18	2/14/18 13:29	BGL
4-Chloro-3-methylphenol	ND	11	µg/L	1		EPA 625	2/13/18	2/14/18 13:29	BGL
Bis(2-chloroethyl)ether	ND	11	µg/L	1		EPA 625	2/13/18	2/14/18 13:29	BGL
Bis(2-chloroisopropyl)ether	ND	11	µg/L	1		EPA 625	2/13/18	2/14/18 13:29	BGL
2-Chloronaphthalene	ND	11	µg/L	1		EPA 625	2/13/18	2/14/18 13:29	BGL
2-Chlorophenol	ND	11	µg/L	1		EPA 625	2/13/18	2/14/18 13:29	BGL
4-Chlorophenylphenylether	ND	11	µg/L	1		EPA 625	2/13/18	2/14/18 13:29	BGL
Di-n-butylphthalate	ND	11	µg/L	1		EPA 625	2/13/18	2/14/18 13:29	BGL
1,3-Dichlorobenzene	ND	5.3	µg/L	1		EPA 625	2/13/18	2/14/18 13:29	BGL
1,4-Dichlorobenzene	ND	5.3	µg/L	1		EPA 625	2/13/18	2/14/18 13:29	BGL
1,2-Dichlorobenzene	ND	5.3	µg/L	1		EPA 625	2/13/18	2/14/18 13:29	BGL
3,3-Dichlorobenzidine	ND	11	µg/L	1	V-34	EPA 625	2/13/18	2/14/18 13:29	BGL
2,4-Dichlorophenol	ND	11	µg/L	1		EPA 625	2/13/18	2/14/18 13:29	BGL
Diethylphthalate	ND	11	µg/L	1		EPA 625	2/13/18	2/14/18 13:29	BGL
2,4-Dimethylphenol	ND	11	µg/L	1		EPA 625	2/13/18	2/14/18 13:29	BGL
Dimethylphthalate	ND	11	µg/L	1		EPA 625	2/13/18	2/14/18 13:29	BGL
4,6-Dinitro-2-methylphenol	ND	11	µg/L	1		EPA 625	2/13/18	2/14/18 13:29	BGL
2,4-Dinitrophenol	ND	11	µg/L	1	V-20	EPA 625	2/13/18	2/14/18 13:29	BGL
2,4-Dinitrotoluene	ND	11	µg/L	1		EPA 625	2/13/18	2/14/18 13:29	BGL
2,6-Dinitrotoluene	ND	11	µg/L	1		EPA 625	2/13/18	2/14/18 13:29	BGL
Di-n-octylphthalate	ND	11	µg/L	1		EPA 625	2/13/18	2/14/18 13:29	BGL
1,2-Diphenylhydrazine (as Azobenzene)	ND	11	µg/L	1		EPA 625	2/13/18	2/14/18 13:29	BGL
Bis(2-Ethylhexyl)phthalate	ND	11	µg/L	1		EPA 625	2/13/18	2/14/18 13:29	BGL
Fluoranthene	ND	5.3	µg/L	1		EPA 625	2/13/18	2/14/18 13:29	BGL
Fluorene	ND	5.3	µg/L	1		EPA 625	2/13/18	2/14/18 13:29	BGL
Hexachlorobenzene	ND	11	µg/L	1		EPA 625	2/13/18	2/14/18 13:29	BGL
Hexachlorobutadiene	ND	11	µg/L	1	V-20	EPA 625	2/13/18	2/14/18 13:29	BGL
Hexachlorocyclopentadiene	ND	11	µg/L	1		EPA 625	2/13/18	2/14/18 13:29	BGL
Hexachloroethane	ND	11	µg/L	1		EPA 625	2/13/18	2/14/18 13:29	BGL
Isophorone	ND	11	µg/L	1		EPA 625	2/13/18	2/14/18 13:29	BGL
Naphthalene	ND	5.3	µg/L	1		EPA 625	2/13/18	2/14/18 13:29	BGL
Nitrobenzene	ND	11	µg/L	1		EPA 625	2/13/18	2/14/18 13:29	BGL
2-Nitrophenol	ND	11	µg/L	1		EPA 625	2/13/18	2/14/18 13:29	BGL
4-Nitrophenol	ND	11	µg/L	1		EPA 625	2/13/18	2/14/18 13:29	BGL
N-Nitrosodimethylamine	ND	11	µg/L	1		EPA 625	2/13/18	2/14/18 13:29	BGL
N-Nitrosodiphenylamine	ND	11	µg/L	1		EPA 625	2/13/18	2/14/18 13:29	BGL
N-Nitrosodi-n-propylamine	ND	11	µg/L	1		EPA 625	2/13/18	2/14/18 13:29	BGL
Pentachlorophenol	ND	11	µg/L	1		EPA 625	2/13/18	2/14/18 13:29	BGL

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Project Location: South Boston, MA

Sample Description:

Work Order: 18B0481

Date Received: 2/13/2018

Field Sample #: LE-TMW4

Sampled: 2/13/2018 12:30

Sample ID: 18B0481-03

Sample Matrix: Ground Water

Semivolatile Organic Compounds by - GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylnaphthalene	ND	5.3	µg/L	1		EPA 625	2/13/18	2/14/18 13:29	BGL
Phenanthrene	ND	5.3	µg/L	1		EPA 625	2/13/18	2/14/18 13:29	BGL
2-Methylphenol	ND	11	µg/L	1		EPA 625	2/13/18	2/14/18 13:29	BGL
Phenol	ND	11	µg/L	1		EPA 625	2/13/18	2/14/18 13:29	BGL
3/4-Methylphenol	ND	11	µg/L	1		EPA 625	2/13/18	2/14/18 13:29	BGL
Pyrene	ND	5.3	µg/L	1		EPA 625	2/13/18	2/14/18 13:29	BGL
1,2,4-Trichlorobenzene	ND	5.3	µg/L	1		EPA 625	2/13/18	2/14/18 13:29	BGL
2,4,6-Trichlorophenol	ND	11	µg/L	1		EPA 625	2/13/18	2/14/18 13:29	BGL
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
2-Fluorophenol	34.5	15-110						2/14/18 13:29	
Phenol-d6	27.1	15-110						2/14/18 13:29	
Nitrobenzene-d5	76.7	30-130						2/14/18 13:29	
2-Fluorobiphenyl	75.7	30-130						2/14/18 13:29	
2,4,6-Tribromophenol	74.2	15-110						2/14/18 13:29	
p-Terphenyl-d14	80.8	30-130						2/14/18 13:29	

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Project Location: South Boston, MA

Sample Description:

Work Order: 18B0481

Date Received: 2/13/2018

Field Sample #: LE-TMW4

Sampled: 2/13/2018 12:30

Sample ID: 18B0481-03

Sample Matrix: Ground Water

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.10	0.058	µg/L	1		EPA 608	2/14/18	2/14/18 11:45	KAL
Aroclor-1221 [1]	ND	0.10	0.063	µg/L	1		EPA 608	2/14/18	2/14/18 11:45	KAL
Aroclor-1232 [1]	ND	0.10	0.039	µg/L	1		EPA 608	2/14/18	2/14/18 11:45	KAL
Aroclor-1242 [1]	ND	0.10	0.055	µg/L	1		EPA 608	2/14/18	2/14/18 11:45	KAL
Aroclor-1248 [1]	ND	0.10	0.066	µg/L	1		EPA 608	2/14/18	2/14/18 11:45	KAL
Aroclor-1254 [1]	ND	0.10	0.072	µg/L	1		EPA 608	2/14/18	2/14/18 11:45	KAL
Aroclor-1260 [1]	ND	0.10	0.074	µg/L	1		EPA 608	2/14/18	2/14/18 11:45	KAL
Surrogates	% Recovery		Recovery Limits		Flag/Qual					
Decachlorobiphenyl [1]	37.3		30-150				2/14/18 11:45			
Decachlorobiphenyl [2]	45.4		30-150				2/14/18 11:45			
Tetrachloro-m-xylene [1]	79.5		30-150				2/14/18 11:45			
Tetrachloro-m-xylene [2]	86.1		30-150				2/14/18 11:45			

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Project Location: South Boston, MA

Sample Description:

Work Order: 18B0481

Date Received: 2/13/2018

Field Sample #: LE-TMW4

Sampled: 2/13/2018 12:30

Sample ID: 18B0481-03

Sample Matrix: Ground Water

Petrolium Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	2/14/18	2/14/18 19:22	RMW
C19-C36 Aliphatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	2/14/18	2/14/18 19:22	RMW
Unadjusted C11-C22 Aromatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	2/14/18	2/14/18 19:22	RMW
C11-C22 Aromatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	2/14/18	2/14/18 19:22	RMW
Acenaphthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	2/14/18	2/14/18 19:22	RMW
Acenaphthylene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	2/14/18	2/14/18 19:22	RMW
Anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	2/14/18	2/14/18 19:22	RMW
Benzo(a)anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	2/14/18	2/14/18 19:22	RMW
Benzo(a)pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	2/14/18	2/14/18 19:22	RMW
Benzo(b)fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	2/14/18	2/14/18 19:22	RMW
Benzo(g,h,i)perylene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	2/14/18	2/14/18 19:22	RMW
Benzo(k)fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	2/14/18	2/14/18 19:22	RMW
Chrysene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	2/14/18	2/14/18 19:22	RMW
Dibenz(a,h)anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	2/14/18	2/14/18 19:22	RMW
Fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	2/14/18	2/14/18 19:22	RMW
Fluorene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	2/14/18	2/14/18 19:22	RMW
Indeno(1,2,3-cd)pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	2/14/18	2/14/18 19:22	RMW
2-Methylnaphthalene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	2/14/18	2/14/18 19:22	RMW
Naphthalene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	2/14/18	2/14/18 19:22	RMW
Phenanthrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	2/14/18	2/14/18 19:22	RMW
Pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	2/14/18	2/14/18 19:22	RMW

Surrogates	% Recovery	Recovery Limits	Flag/Qual
Chlorooctadecane (COD)	99.2	40-140	
o-Terphenyl (OTP)	85.3	40-140	
2-Bromonaphthalene	74.1	40-140	
2-Fluorobiphenyl	87.7	40-140	

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Project Location: South Boston, MA

Sample Description:

Work Order: 18B0481

Date Received: 2/13/2018

Field Sample #: LE-TMW4

Sampled: 2/13/2018 12:30

Sample ID: 18B0481-03

Sample Matrix: Ground Water

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	5.0		µg/L	5	DL-15	EPA 200.8	2/14/18	2/15/18 8:39	MJH
Arsenic	ND	5.0		µg/L	5	DL-15	EPA 200.8	2/14/18	2/15/18 8:39	MJH
Cadmium	ND	1.0		µg/L	5	DL-15	EPA 200.8	2/14/18	2/15/18 8:39	MJH
Chromium	ND	50		µg/L	5	DL-15	EPA 200.8	2/14/18	2/15/18 8:39	MJH
Chromium, Trivalent	0.0			mg/L	1		Tri Chrome Calc.	2/14/18	2/15/18 9:54	MJH
Copper	18	5.0		µg/L	5	DL-15	EPA 200.8	2/14/18	2/15/18 8:39	MJH
Iron	12	0.050		mg/L	1		EPA 200.7	2/14/18	2/15/18 12:40	QNW
Lead	16	2.5		µg/L	5	DL-15	EPA 200.8	2/14/18	2/15/18 8:39	MJH
Mercury	ND	0.00010		mg/L	1		EPA 245.1	2/14/18	2/15/18 9:16	EJB
Nickel	ND	25		µg/L	5	DL-15	EPA 200.8	2/14/18	2/15/18 8:39	MJH
Selenium	ND	25	11	µg/L	5	DL-15	EPA 200.8	2/14/18	2/15/18 8:39	MJH
Silver	ND	1.0		µg/L	5	DL-15	EPA 200.8	2/14/18	2/15/18 8:39	MJH
Zinc	ND	100		µg/L	5	DL-15	EPA 200.8	2/14/18	2/15/18 8:39	MJH

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Project Location: South Boston, MA

Sample Description:

Work Order: 18B0481

Date Received: 2/13/2018

Field Sample #: LE-TMW4

Sampled: 2/13/2018 12:30

Sample ID: 18B0481-03

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Chlorine, Residual	0.054	0.020		mg/L	1	Z-01	SM21-22 4500 CL G	2/13/18	2/13/18 21:00	LL
Hexavalent Chromium	ND	0.0040		mg/L	1		SM21-22 3500 Cr B	2/13/18	2/13/18 23:24	LL
Total Suspended Solids	71	5.0		mg/L	1		SM21-22 2540D	2/15/18	2/15/18 8:45	LL
Silica Gel Treated HEM (SGT-HEM)	ND	1.5		mg/L	1		EPA 1664B	2/15/18	2/15/18 10:30	LL

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Project Location: South Boston, MA

Sample Description:

Work Order: 18B0481

Date Received: 2/13/2018

Field Sample #: LE-TMW4

Sampled: 2/13/2018 12:30

Sample ID: 18B0481-03

Sample Matrix: Ground Water

Drinking Water Organics EPA 504.1

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
1,2-Dibromoethane (EDB) (1)	ND	0.021	µg/L	1		EPA 504.1	2/14/18	2/14/18 11:55	JMB
Surrogates	% Recovery	Recovery Limits			Flag/Qual				
1,3-Dibromopropane (1)	100	70-130						2/14/18 11:55	

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Project Location: South Boston, MA

Sample Description:

Work Order: 18B0481

Date Received: 2/13/2018

Field Sample #: LE-TMW4

Sampled: 2/13/2018 12:30

Sample ID: 18B0481-03

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Ammonia as N	1	0.075	0.024	mg/L	1		SM19-22 4500 NH3 C		2/15/18 0:00	ALPHA
Cyanide	0.004	0.005	0.001	mg/L	1	J	SM21-22 4500 CN E		2/14/18 0:00	ALPHA

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Project Location: South Boston, MA

Sample Description:

Work Order: 18B0481

Date Received: 2/13/2018

Field Sample #: LE-TMW4

Sampled: 2/13/2018 12:30

Sample ID: 18B0481-03

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Chloride	2180	100	9.94	mg/L	100		EPA 300.0		2/14/18 0:00	EURO

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Project Location: South Boston, MA

Sample Description:

Work Order: 18B0481

Date Received: 2/13/2018

Field Sample #: LE-TMW4

Sampled: 2/13/2018 12:30

Sample ID: 18B0481-03

Sample Matrix: Ground Water

Semivolatile Organic Compounds by GC

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Ethanol	ND	2000	500	ug/L	1		SW-846 8015C		2/15/18 0:00	TA NA

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Project Location: South Boston, MA

Sample Description:

Work Order: 18B0481

Date Received: 2/13/2018

Field Sample #: LE-TMW5

Sampled: 2/13/2018 15:45

Sample ID: 18B0481-04

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	50	9.7	µg/L	1		EPA 624	2/14/18	2/14/18 9:02	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.50	0.11	µg/L	1		EPA 624	2/14/18	2/14/18 9:02	MFF
Benzene	ND	1.0	0.12	µg/L	1		EPA 624	2/14/18	2/14/18 9:02	MFF
Bromodichloromethane	ND	2.0	0.30	µg/L	1		EPA 624	2/14/18	2/14/18 9:02	MFF
Bromoform	ND	2.0	0.21	µg/L	1		EPA 624	2/14/18	2/14/18 9:02	MFF
Bromomethane	ND	5.0	0.94	µg/L	1		EPA 624	2/14/18	2/14/18 9:02	MFF
tert-Butyl Alcohol (TBA)	ND	20	2.2	µg/L	1		EPA 624	2/14/18	2/14/18 9:02	MFF
Carbon Tetrachloride	ND	2.0	0.25	µg/L	1		EPA 624	2/14/18	2/14/18 9:02	MFF
Chlorobenzene	ND	2.0	0.16	µg/L	1		EPA 624	2/14/18	2/14/18 9:02	MFF
Chlorodibromomethane	ND	2.0	0.10	µg/L	1		EPA 624	2/14/18	2/14/18 9:02	MFF
Chloroethane	ND	2.0	0.28	µg/L	1		EPA 624	2/14/18	2/14/18 9:02	MFF
Chloroform	ND	2.0	0.22	µg/L	1		EPA 624	2/14/18	2/14/18 9:02	MFF
Chloromethane	ND	2.0	0.55	µg/L	1		EPA 624	2/14/18	2/14/18 9:02	MFF
1,2-Dichlorobenzene	ND	2.0	0.17	µg/L	1		EPA 624	2/14/18	2/14/18 9:02	MFF
1,3-Dichlorobenzene	ND	2.0	0.17	µg/L	1		EPA 624	2/14/18	2/14/18 9:02	MFF
1,4-Dichlorobenzene	ND	2.0	0.15	µg/L	1		EPA 624	2/14/18	2/14/18 9:02	MFF
1,2-Dichloroethane	ND	2.0	0.19	µg/L	1		EPA 624	2/14/18	2/14/18 9:02	MFF
1,1-Dichloroethane	ND	2.0	0.16	µg/L	1		EPA 624	2/14/18	2/14/18 9:02	MFF
1,1-Dichloroethylene	ND	2.0	0.21	µg/L	1		EPA 624	2/14/18	2/14/18 9:02	MFF
trans-1,2-Dichloroethylene	ND	2.0	0.15	µg/L	1		EPA 624	2/14/18	2/14/18 9:02	MFF
1,2-Dichloropropane	ND	2.0	0.13	µg/L	1		EPA 624	2/14/18	2/14/18 9:02	MFF
cis-1,3-Dichloropropene	ND	2.0	0.12	µg/L	1		EPA 624	2/14/18	2/14/18 9:02	MFF
1,4-Dioxane	ND	50	26	µg/L	1		EPA 624	2/14/18	2/14/18 9:02	MFF
trans-1,3-Dichloropropene	ND	2.0	0.11	µg/L	1		EPA 624	2/14/18	2/14/18 9:02	MFF
Ethylbenzene	ND	2.0	0.13	µg/L	1		EPA 624	2/14/18	2/14/18 9:02	MFF
Methyl tert-Butyl Ether (MTBE)	ND	2.0	0.090	µg/L	1		EPA 624	2/14/18	2/14/18 9:02	MFF
Methylene Chloride	ND	5.0	3.2	µg/L	1		EPA 624	2/14/18	2/14/18 9:02	MFF
1,1,2,2-Tetrachloroethane	ND	2.0	0.16	µg/L	1		EPA 624	2/14/18	2/14/18 9:02	MFF
Tetrachloroethylene	ND	2.0	0.27	µg/L	1		EPA 624	2/14/18	2/14/18 9:02	MFF
Toluene	ND	1.0	0.17	µg/L	1		EPA 624	2/14/18	2/14/18 9:02	MFF
1,1,1-Trichloroethane	ND	2.0	0.13	µg/L	1		EPA 624	2/14/18	2/14/18 9:02	MFF
1,1,2-Trichloroethane	ND	2.0	0.24	µg/L	1		EPA 624	2/14/18	2/14/18 9:02	MFF
Trichloroethylene	ND	2.0	0.20	µg/L	1		EPA 624	2/14/18	2/14/18 9:02	MFF
Trichlorofluoromethane (Freon 11)	ND	2.0	0.15	µg/L	1		EPA 624	2/14/18	2/14/18 9:02	MFF
Vinyl Chloride	ND	2.0	0.13	µg/L	1		EPA 624	2/14/18	2/14/18 9:02	MFF
m+p Xylene	ND	2.0	0.26	µg/L	1		EPA 624	2/14/18	2/14/18 9:02	MFF
o-Xylene	ND	2.0	0.13	µg/L	1		EPA 624	2/14/18	2/14/18 9:02	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	96.3	70-130	2/14/18 9:02
Toluene-d8	100	70-130	2/14/18 9:02
4-Bromofluorobenzene	92.9	70-130	2/14/18 9:02

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: South Boston, MA

Sample Description:

Work Order: 18B0481

Date Received: 2/13/2018

Field Sample #: LE-TMW5

Sampled: 2/13/2018 15:45

Sample ID: 18B0481-04

Sample Matrix: Ground Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Benzo(a)anthracene	0.18	0.051	0.051	µg/L	1		SW-846 8270D	2/13/18	2/15/18 13:35	CJM
Benzo(a)pyrene	0.20	0.10	0.10	µg/L	1		SW-846 8270D	2/13/18	2/15/18 13:35	CJM
Benzo(b)fluoranthene	0.26	0.051	0.051	µg/L	1		SW-846 8270D	2/13/18	2/15/18 13:35	CJM
Benzo(k)fluoranthene	ND	0.20	0.20	µg/L	1		SW-846 8270D	2/13/18	2/15/18 13:35	CJM
Bis(2-Ethylhexyl)phthalate	1.2	1.0	0.10	µg/L	1		SW-846 8270D	2/13/18	2/15/18 13:35	CJM
Chrysene	ND	0.20	0.20	µg/L	1		SW-846 8270D	2/13/18	2/15/18 13:35	CJM
Dibenz(a,h)anthracene	ND	0.20	0.20	µg/L	1		SW-846 8270D	2/13/18	2/15/18 13:35	CJM
Indeno(1,2,3-cd)pyrene	ND	0.20	0.20	µg/L	1		SW-846 8270D	2/13/18	2/15/18 13:35	CJM
Pentachlorophenol	0.76	1.0	0.35	µg/L	1	Ja	SW-846 8270D	2/13/18	2/15/18 13:35	CJM
Surrogates	% Recovery		Recovery Limits		Flag/Qual					
2-Fluorophenol	46.8		15-110				2/15/18 13:35			
Phenol-d6	36.9		15-110				2/15/18 13:35			
Nitrobenzene-d5	77.1		30-130				2/15/18 13:35			
2-Fluorobiphenyl	77.0		30-130				2/15/18 13:35			
2,4,6-Tribromophenol	73.3		15-110				2/15/18 13:35			
p-Terphenyl-d14	61.0		30-130				2/15/18 13:35			

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Project Location: South Boston, MA

Sample Description:

Work Order: 18B0481

Date Received: 2/13/2018

Field Sample #: LE-TMW5

Sampled: 2/13/2018 15:45

Sample ID: 18B0481-04

Sample Matrix: Ground Water

Semivolatile Organic Compounds by - GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	5.1	µg/L	1		EPA 625	2/13/18	2/14/18 13:05	BGL
Acenaphthylene	ND	5.1	µg/L	1		EPA 625	2/13/18	2/14/18 13:05	BGL
Anthracene	ND	5.1	µg/L	1		EPA 625	2/13/18	2/14/18 13:05	BGL
Benzidine	ND	20	µg/L	1	V-04, V-05	EPA 625	2/13/18	2/14/18 13:05	BGL
Benzo(g,h,i)perylene	ND	5.1	µg/L	1		EPA 625	2/13/18	2/14/18 13:05	BGL
4-Bromophenylphenylether	ND	10	µg/L	1		EPA 625	2/13/18	2/14/18 13:05	BGL
Butylbenzylphthalate	ND	10	µg/L	1		EPA 625	2/13/18	2/14/18 13:05	BGL
4-Chloro-3-methylphenol	ND	10	µg/L	1		EPA 625	2/13/18	2/14/18 13:05	BGL
Bis(2-chloroethyl)ether	ND	10	µg/L	1		EPA 625	2/13/18	2/14/18 13:05	BGL
Bis(2-chloroisopropyl)ether	ND	10	µg/L	1		EPA 625	2/13/18	2/14/18 13:05	BGL
2-Chloronaphthalene	ND	10	µg/L	1		EPA 625	2/13/18	2/14/18 13:05	BGL
2-Chlorophenol	ND	10	µg/L	1		EPA 625	2/13/18	2/14/18 13:05	BGL
4-Chlorophenylphenylether	ND	10	µg/L	1		EPA 625	2/13/18	2/14/18 13:05	BGL
Di-n-butylphthalate	ND	10	µg/L	1		EPA 625	2/13/18	2/14/18 13:05	BGL
1,3-Dichlorobenzene	ND	5.1	µg/L	1		EPA 625	2/13/18	2/14/18 13:05	BGL
1,4-Dichlorobenzene	ND	5.1	µg/L	1		EPA 625	2/13/18	2/14/18 13:05	BGL
1,2-Dichlorobenzene	ND	5.1	µg/L	1		EPA 625	2/13/18	2/14/18 13:05	BGL
3,3-Dichlorobenzidine	ND	10	µg/L	1	V-34	EPA 625	2/13/18	2/14/18 13:05	BGL
2,4-Dichlorophenol	ND	10	µg/L	1		EPA 625	2/13/18	2/14/18 13:05	BGL
Diethylphthalate	ND	10	µg/L	1		EPA 625	2/13/18	2/14/18 13:05	BGL
2,4-Dimethylphenol	ND	10	µg/L	1		EPA 625	2/13/18	2/14/18 13:05	BGL
Dimethylphthalate	ND	10	µg/L	1		EPA 625	2/13/18	2/14/18 13:05	BGL
4,6-Dinitro-2-methylphenol	ND	10	µg/L	1		EPA 625	2/13/18	2/14/18 13:05	BGL
2,4-Dinitrophenol	ND	10	µg/L	1	V-20	EPA 625	2/13/18	2/14/18 13:05	BGL
2,4-Dinitrotoluene	ND	10	µg/L	1		EPA 625	2/13/18	2/14/18 13:05	BGL
2,6-Dinitrotoluene	ND	10	µg/L	1		EPA 625	2/13/18	2/14/18 13:05	BGL
Di-n-octylphthalate	ND	10	µg/L	1		EPA 625	2/13/18	2/14/18 13:05	BGL
1,2-Diphenylhydrazine (as Azobenzene)	ND	10	µg/L	1		EPA 625	2/13/18	2/14/18 13:05	BGL
Bis(2-Ethylhexyl)phthalate	ND	10	µg/L	1		EPA 625	2/13/18	2/14/18 13:05	BGL
Fluoranthene	ND	5.1	µg/L	1		EPA 625	2/13/18	2/14/18 13:05	BGL
Fluorene	ND	5.1	µg/L	1		EPA 625	2/13/18	2/14/18 13:05	BGL
Hexachlorobenzene	ND	10	µg/L	1		EPA 625	2/13/18	2/14/18 13:05	BGL
Hexachlorobutadiene	ND	10	µg/L	1	V-20	EPA 625	2/13/18	2/14/18 13:05	BGL
Hexachlorocyclopentadiene	ND	10	µg/L	1		EPA 625	2/13/18	2/14/18 13:05	BGL
Hexachloroethane	ND	10	µg/L	1		EPA 625	2/13/18	2/14/18 13:05	BGL
Isophorone	ND	10	µg/L	1		EPA 625	2/13/18	2/14/18 13:05	BGL
Naphthalene	ND	5.1	µg/L	1		EPA 625	2/13/18	2/14/18 13:05	BGL
Nitrobenzene	ND	10	µg/L	1		EPA 625	2/13/18	2/14/18 13:05	BGL
2-Nitrophenol	ND	10	µg/L	1		EPA 625	2/13/18	2/14/18 13:05	BGL
4-Nitrophenol	ND	10	µg/L	1		EPA 625	2/13/18	2/14/18 13:05	BGL
N-Nitrosodimethylamine	ND	10	µg/L	1		EPA 625	2/13/18	2/14/18 13:05	BGL
N-Nitrosodiphenylamine	ND	10	µg/L	1		EPA 625	2/13/18	2/14/18 13:05	BGL
N-Nitrosodi-n-propylamine	ND	10	µg/L	1		EPA 625	2/13/18	2/14/18 13:05	BGL
Pentachlorophenol	ND	10	µg/L	1		EPA 625	2/13/18	2/14/18 13:05	BGL

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Project Location: South Boston, MA

Sample Description:

Work Order: 18B0481

Date Received: 2/13/2018

Field Sample #: LE-TMW5

Sampled: 2/13/2018 15:45

Sample ID: 18B0481-04

Sample Matrix: Ground Water

Semivolatile Organic Compounds by - GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylnaphthalene	ND	5.1	µg/L	1		EPA 625	2/13/18	2/14/18 13:05	BGL
Phenanthrene	ND	5.1	µg/L	1		EPA 625	2/13/18	2/14/18 13:05	BGL
2-Methylphenol	ND	10	µg/L	1		EPA 625	2/13/18	2/14/18 13:05	BGL
Phenol	ND	10	µg/L	1		EPA 625	2/13/18	2/14/18 13:05	BGL
3/4-Methylphenol	ND	10	µg/L	1		EPA 625	2/13/18	2/14/18 13:05	BGL
Pyrene	ND	5.1	µg/L	1		EPA 625	2/13/18	2/14/18 13:05	BGL
1,2,4-Trichlorobenzene	ND	5.1	µg/L	1		EPA 625	2/13/18	2/14/18 13:05	BGL
2,4,6-Trichlorophenol	ND	10	µg/L	1		EPA 625	2/13/18	2/14/18 13:05	BGL
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
2-Fluorophenol	23.2	15-110						2/14/18 13:05	
Phenol-d6	19.6	15-110						2/14/18 13:05	
Nitrobenzene-d5	61.4	30-130						2/14/18 13:05	
2-Fluorobiphenyl	60.8	30-130						2/14/18 13:05	
2,4,6-Tribromophenol	49.4	15-110						2/14/18 13:05	
p-Terphenyl-d14	66.1	30-130						2/14/18 13:05	

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Project Location: South Boston, MA

Sample Description:

Work Order: 18B0481

Date Received: 2/13/2018

Field Sample #: LE-TMW5

Sampled: 2/13/2018 15:45

Sample ID: 18B0481-04

Sample Matrix: Ground Water

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.10	0.059	µg/L	1		EPA 608	2/14/18	2/14/18 12:02	KAL
Aroclor-1221 [1]	ND	0.10	0.064	µg/L	1		EPA 608	2/14/18	2/14/18 12:02	KAL
Aroclor-1232 [1]	ND	0.10	0.040	µg/L	1		EPA 608	2/14/18	2/14/18 12:02	KAL
Aroclor-1242 [1]	ND	0.10	0.056	µg/L	1		EPA 608	2/14/18	2/14/18 12:02	KAL
Aroclor-1248 [1]	ND	0.10	0.067	µg/L	1		EPA 608	2/14/18	2/14/18 12:02	KAL
Aroclor-1254 [1]	ND	0.10	0.074	µg/L	1		EPA 608	2/14/18	2/14/18 12:02	KAL
Aroclor-1260 [1]	ND	0.10	0.076	µg/L	1		EPA 608	2/14/18	2/14/18 12:02	KAL
Surrogates	% Recovery		Recovery Limits		Flag/Qual					
Decachlorobiphenyl [1]	53.1		30-150				2/14/18 12:02			
Decachlorobiphenyl [2]	64.9		30-150				2/14/18 12:02			
Tetrachloro-m-xylene [1]	87.1		30-150				2/14/18 12:02			
Tetrachloro-m-xylene [2]	94.1		30-150				2/14/18 12:02			

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Project Location: South Boston, MA

Sample Description:

Work Order: 18B0481

Date Received: 2/13/2018

Field Sample #: LE-TMW5

Sampled: 2/13/2018 15:45

Sample ID: 18B0481-04

Sample Matrix: Ground Water

Petrolium Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	2/14/18	2/14/18 19:42	RMW
C19-C36 Aliphatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	2/14/18	2/14/18 19:42	RMW
Unadjusted C11-C22 Aromatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	2/14/18	2/14/18 19:42	RMW
C11-C22 Aromatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	2/14/18	2/14/18 19:42	RMW
Acenaphthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	2/14/18	2/14/18 19:42	RMW
Acenaphthylene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	2/14/18	2/14/18 19:42	RMW
Anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	2/14/18	2/14/18 19:42	RMW
Benzo(a)anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	2/14/18	2/14/18 19:42	RMW
Benzo(a)pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	2/14/18	2/14/18 19:42	RMW
Benzo(b)fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	2/14/18	2/14/18 19:42	RMW
Benzo(g,h,i)perylene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	2/14/18	2/14/18 19:42	RMW
Benzo(k)fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	2/14/18	2/14/18 19:42	RMW
Chrysene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	2/14/18	2/14/18 19:42	RMW
Dibenz(a,h)anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	2/14/18	2/14/18 19:42	RMW
Fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	2/14/18	2/14/18 19:42	RMW
Fluorene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	2/14/18	2/14/18 19:42	RMW
Indeno(1,2,3-cd)pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	2/14/18	2/14/18 19:42	RMW
2-Methylnaphthalene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	2/14/18	2/14/18 19:42	RMW
Naphthalene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	2/14/18	2/14/18 19:42	RMW
Phenanthrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	2/14/18	2/14/18 19:42	RMW
Pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	2/14/18	2/14/18 19:42	RMW
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
Chlorooctadecane (COD)	83.8	40-140							
o-Terphenyl (OTP)	86.7	40-140							
2-Bromonaphthalene	95.8	40-140							
2-Fluorobiphenyl	93.3	40-140							

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Project Location: South Boston, MA

Sample Description:

Work Order: 18B0481

Date Received: 2/13/2018

Field Sample #: LE-TMW5

Sampled: 2/13/2018 15:45

Sample ID: 18B0481-04

Sample Matrix: Ground Water

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.0		µg/L	1		EPA 200.8	2/14/18	2/15/18 8:32	MJH
Arsenic	3.8	1.0		µg/L	1		EPA 200.8	2/14/18	2/15/18 8:32	MJH
Cadmium	0.23	0.20		µg/L	1		EPA 200.8	2/14/18	2/15/18 8:32	MJH
Chromium	ND	10		µg/L	1		EPA 200.8	2/14/18	2/15/18 8:32	MJH
Chromium, Trivalent	0.0			mg/L	1		Tri Chrome Calc.	2/14/18	2/15/18 9:54	MJH
Copper	3.8	1.0		µg/L	1		EPA 200.8	2/14/18	2/15/18 8:32	MJH
Iron	6.3	0.050		mg/L	1		EPA 200.7	2/14/18	2/15/18 12:57	QNW
Lead	88	0.50		µg/L	1		EPA 200.8	2/14/18	2/15/18 8:32	MJH
Mercury	0.00042	0.00010		mg/L	1		EPA 245.1	2/14/18	2/15/18 9:17	EJB
Nickel	10	5.0		µg/L	1		EPA 200.8	2/14/18	2/15/18 8:32	MJH
Selenium	ND	5.0	2.1	µg/L	1		EPA 200.8	2/14/18	2/15/18 8:32	MJH
Silver	ND	0.20		µg/L	1		EPA 200.8	2/14/18	2/15/18 8:32	MJH
Zinc	55	20		µg/L	1		EPA 200.8	2/14/18	2/15/18 8:32	MJH

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Project Location: South Boston, MA

Sample Description:

Work Order: 18B0481

Date Received: 2/13/2018

Field Sample #: LE-TMW5

Sampled: 2/13/2018 15:45

Sample ID: 18B0481-04

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Chlorine, Residual	ND	0.020		mg/L	1		SM21-22 4500 CL G	2/13/18	2/13/18 21:00	LL
Hexavalent Chromium	ND	0.0040		mg/L	1		SM21-22 3500 Cr B	2/13/18	2/13/18 23:24	LL
Total Suspended Solids	1200	12		mg/L	1		SM21-22 2540D	2/15/18	2/15/18 8:45	LL
Silica Gel Treated HEM (SGT-HEM)	ND	1.5		mg/L	1		EPA 1664B	2/15/18	2/15/18 10:30	LL

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Project Location: South Boston, MA

Sample Description:

Work Order: 18B0481

Date Received: 2/13/2018

Field Sample #: LE-TMW5

Sampled: 2/13/2018 15:45

Sample ID: 18B0481-04

Sample Matrix: Ground Water

Drinking Water Organics EPA 504.1

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
1,2-Dibromoethane (EDB) (1)	ND	0.020	µg/L	1		EPA 504.1	2/14/18	2/14/18 12:18	JMB
Surrogates	% Recovery	Recovery Limits			Flag/Qual				
1,3-Dibromopropane (1)	79.1	70-130						2/14/18 12:18	

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Project Location: South Boston, MA

Sample Description:

Work Order: 18B0481

Date Received: 2/13/2018

Field Sample #: LE-TMW5

Sampled: 2/13/2018 15:45

Sample ID: 18B0481-04

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Ammonia as N	0.791	0.075	0.024	mg/L	1		SM19-22 4500 NH3 C		2/15/18 0:00	ALPHA
Cyanide	0.003	0.005	0.001	mg/L	1	J	SM21-22 4500 CN E		2/14/18 0:00	ALPHA

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Project Location: South Boston, MA

Sample Description:

Work Order: 18B0481

Date Received: 2/13/2018

Field Sample #: LE-TMW5

Sampled: 2/13/2018 15:45

Sample ID: 18B0481-04

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Chloride	46.6	1	0.0994	mg/L	1		EPA 300.0		2/14/18 0:00	EURO

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Project Location: South Boston, MA

Sample Description:

Work Order: 18B0481

Date Received: 2/13/2018

Field Sample #: LE-TMW5

Sampled: 2/13/2018 15:45

Sample ID: 18B0481-04

Sample Matrix: Ground Water

Semivolatile Organic Compounds by GC

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Ethanol	ND	2000	500	ug/L	1		SW-846 8015C		2/15/18 0:00	TA NA

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Sample Extraction Data**EPA 1664B**

Lab Number [Field ID]	Batch	Initial [mL]	Date	
18B0481-03 [LE-TMW4]	B196908	950	02/15/18	
18B0481-04 [LE-TMW5]	B196908	950	02/15/18	

Prep Method: EPA 200.7-EPA 200.7

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
18B0481-03 [LE-TMW4]	B196821	50.0	50.0	02/14/18
18B0481-04 [LE-TMW5]	B196821	50.0	50.0	02/14/18

Prep Method: EPA 200.8-EPA 200.8

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
18B0481-03 [LE-TMW4]	B196822	50.0	50.0	02/14/18
18B0481-04 [LE-TMW5]	B196822	50.0	50.0	02/14/18

Prep Method: EPA 245.1-EPA 245.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
18B0481-03 [LE-TMW4]	B196827	6.00	6.00	02/14/18
18B0481-04 [LE-TMW5]	B196827	6.00	6.00	02/14/18

Prep Method: EPA 504 water-EPA 504.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
18B0481-03 [LE-TMW4]	B196834	33.7	35.0	02/14/18
18B0481-04 [LE-TMW5]	B196834	34.8	35.0	02/14/18

Prep Method: SW-846 3510C-EPA 608

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
18B0481-03 [LE-TMW4]	B196794	980	5.00	02/14/18
18B0481-04 [LE-TMW5]	B196794	960	5.00	02/14/18

Prep Method: SW-846 5030B-EPA 624

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
18B0481-03 [LE-TMW4]	B196770	5	5.00	02/14/18
18B0481-04 [LE-TMW5]	B196770	5	5.00	02/14/18

Prep Method: SW-846 3510C-EPA 625

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
18B0481-03 [LE-TMW4]	B196705	940	1.00	02/13/18
18B0481-04 [LE-TMW5]	B196705	980	1.00	02/13/18

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Sample Extraction Data**Prep Method: SW-846 3510C-MADEP-EPH-04-1.1**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
18B0481-03 [LE-TMW4]	B196793	1000	2.00	02/14/18
18B0481-04 [LE-TMW5]	B196793	1000	2.00	02/14/18

Prep Method: % Solids-SM 2540G

Lab Number [Field ID]	Batch	Date
18B0481-01 [LE-WC27]	B196792	02/13/18
18B0481-02 [LE-WC28]	B196792	02/13/18

SM21-22 2510B Modified

Lab Number [Field ID]	Batch	Initial [g]	Date
18B0481-01 [LE-WC27]	B196838	1.00	02/14/18
18B0481-02 [LE-WC28]	B196838	1.00	02/14/18

SM21-22 2540D

Lab Number [Field ID]	Batch	Initial [mL]	Date
18B0481-03 [LE-TMW4]	B196911	100	02/15/18
18B0481-04 [LE-TMW5]	B196911	40.0	02/15/18

SM21-22 3500 Cr B

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
18B0481-03 [LE-TMW4]	B196804	50.0	50.0	02/13/18
18B0481-04 [LE-TMW5]	B196804	50.0	50.0	02/13/18

SM21-22 4500 CL G

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
18B0481-03 [LE-TMW4]	B196805	100	100	02/13/18
18B0481-04 [LE-TMW5]	B196805	100	100	02/13/18

SW-846 1030

Lab Number [Field ID]	Batch	Initial [g]	Date
18B0481-01 [LE-WC27]	B196950	50.0	02/14/18
18B0481-02 [LE-WC28]	B196950	50.0	02/14/18

Prep Method: SW-846 3051-SW-846 6010C-D

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18B0481-01 [LE-WC27]	B196818	1.52	50.0	02/14/18
18B0481-02 [LE-WC28]	B196818	1.51	50.0	02/14/18

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Sample Extraction Data

Prep Method: SW-846 7471-SW-846 7471B

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18B0481-01 [LE-WC27]	B196773	0.598	50.0	02/14/18
18B0481-02 [LE-WC28]	B196773	0.597	50.0	02/14/18

Prep Method: SW-846 3546-SW-846 8082A

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18B0481-01 [LE-WC27]	B196707	10.0	10.0	02/13/18
18B0481-02 [LE-WC28]	B196707	10.0	10.0	02/13/18

Prep Method: SW-846 3546-SW-846 8100 Modified

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18B0481-01 [LE-WC27]	B196790	30.0	1.00	02/13/18
18B0481-02 [LE-WC28]	B196790	30.0	1.00	02/13/18

Prep Method: SW-846 5035-SW-846 8260C

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18B0481-01 [LE-WC27]	B196829	4.69	10.0	02/14/18
18B0481-02 [LE-WC28]	B196829	3.25	10.0	02/14/18

Prep Method: SW-846 3546-SW-846 8270D

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18B0481-01 [LE-WC27]	B196704	30.0	1.00	02/13/18
18B0481-02 [LE-WC28]	B196704	30.0	1.00	02/13/18

Prep Method: SW-846 3510C-SW-846 8270D

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
18B0481-03 [LE-TMW4]	B196787	940	1.00	02/13/18
18B0481-04 [LE-TMW5]	B196787	980	1.00	02/13/18

SW-846 9014

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18B0481-01 [LE-WC27]	B196885	25.6	250	02/14/18
18B0481-02 [LE-WC28]	B196885	25.2	250	02/14/18

SW-846 9030A

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18B0481-01 [LE-WC27]	B196886	25.6	250	02/14/18
18B0481-02 [LE-WC28]	B196886	25.2	250	02/14/18

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Sample Extraction Data

SW-846 9045C

Lab Number [Field ID]	Batch	Initial [g]	Date
18B0481-01 [LE-WC27]	B196883	20.0	02/14/18
18B0481-02 [LE-WC28]	B196883	20.0	02/14/18

Prep Method: SW-846 3005A-Tri Chrome Calc.

Lab Number [Field ID]	Batch	Initial [mL]	Date
18B0481-03 [LE-TMW4]	B196823	1.00	02/14/18
18B0481-04 [LE-TMW5]	B196823	1.00	02/14/18

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QUALITY CONTROL
Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B196829 - SW-846 5035										
Blank (B196829-BLK1)				Prepared & Analyzed: 02/14/18						
Acetone	ND	0.10	mg/Kg wet							
tert-Amyl Methyl Ether (TAME)	ND	0.0010	mg/Kg wet							
Benzene	ND	0.0020	mg/Kg wet							
Bromobenzene	ND	0.0020	mg/Kg wet							
Bromochloromethane	ND	0.0020	mg/Kg wet							
Bromodichloromethane	ND	0.0020	mg/Kg wet							
Bromoform	ND	0.0020	mg/Kg wet							
Bromomethane	ND	0.010	mg/Kg wet							R-05, V-34
2-Butanone (MEK)	ND	0.040	mg/Kg wet							
n-Butylbenzene	ND	0.0020	mg/Kg wet							
sec-Butylbenzene	ND	0.0020	mg/Kg wet							
tert-Butylbenzene	ND	0.0020	mg/Kg wet							
tert-Butyl Ethyl Ether (TBEE)	ND	0.0010	mg/Kg wet							
Carbon Disulfide	ND	0.0060	mg/Kg wet							
Carbon Tetrachloride	ND	0.0020	mg/Kg wet							
Chlorobenzene	ND	0.0020	mg/Kg wet							
Chlorodibromomethane	ND	0.0010	mg/Kg wet							
Chloroethane	ND	0.010	mg/Kg wet							
Chloroform	ND	0.0040	mg/Kg wet							
Chloromethane	ND	0.010	mg/Kg wet							
2-Chlorotoluene	ND	0.0020	mg/Kg wet							
4-Chlorotoluene	ND	0.0020	mg/Kg wet							
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0020	mg/Kg wet							
1,2-Dibromoethane (EDB)	ND	0.0010	mg/Kg wet							
Dibromomethane	ND	0.0020	mg/Kg wet							
1,2-Dichlorobenzene	ND	0.0020	mg/Kg wet							
1,3-Dichlorobenzene	ND	0.0020	mg/Kg wet							
1,4-Dichlorobenzene	ND	0.0020	mg/Kg wet							
Dichlorodifluoromethane (Freon 12)	ND	0.010	mg/Kg wet							V-05
1,1-Dichloroethane	ND	0.0020	mg/Kg wet							
1,2-Dichloroethane	ND	0.0020	mg/Kg wet							
1,1-Dichloroethylene	ND	0.0040	mg/Kg wet							
cis-1,2-Dichloroethylene	ND	0.0020	mg/Kg wet							
trans-1,2-Dichloroethylene	ND	0.0020	mg/Kg wet							
1,2-Dichloropropane	ND	0.0020	mg/Kg wet							
1,3-Dichloropropane	ND	0.0010	mg/Kg wet							
2,2-Dichloropropane	ND	0.0020	mg/Kg wet							L-04, V-05
1,1-Dichloropropene	ND	0.0020	mg/Kg wet							
cis-1,3-Dichloropropene	ND	0.0010	mg/Kg wet							
trans-1,3-Dichloropropene	ND	0.0010	mg/Kg wet							
Diethyl Ether	ND	0.010	mg/Kg wet							
Diisopropyl Ether (DIPE)	ND	0.0010	mg/Kg wet							
1,4-Dioxane	ND	0.10	mg/Kg wet							V-16
Ethylbenzene	ND	0.0020	mg/Kg wet							
Hexachlorobutadiene	ND	0.0020	mg/Kg wet							
2-Hexanone (MBK)	ND	0.020	mg/Kg wet							
Isopropylbenzene (Cumene)	ND	0.0020	mg/Kg wet							
p-Isopropyltoluene (p-Cymene)	ND	0.0020	mg/Kg wet							
Methyl tert-Butyl Ether (MTBE)	ND	0.0040	mg/Kg wet							
Methylene Chloride	ND	0.010	mg/Kg wet							
4-Methyl-2-pentanone (MIBK)	ND	0.020	mg/Kg wet							
Naphthalene	ND	0.0040	mg/Kg wet							

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B196829 - SW-846 5035

Blank (B196829-BLK1)

Prepared & Analyzed: 02/14/18

n-Propylbenzene	ND	0.0020	mg/Kg wet							
Styrene	ND	0.0020	mg/Kg wet							
1,1,1,2-Tetrachloroethane	ND	0.0020	mg/Kg wet							
1,1,2,2-Tetrachloroethane	ND	0.0010	mg/Kg wet							
Tetrachloroethylene	ND	0.0020	mg/Kg wet							
Tetrahydrofuran	ND	0.010	mg/Kg wet							
Toluene	ND	0.0020	mg/Kg wet							
1,2,3-Trichlorobenzene	ND	0.0020	mg/Kg wet							
1,2,4-Trichlorobenzene	ND	0.0020	mg/Kg wet							
1,1,1-Trichloroethane	ND	0.0020	mg/Kg wet							
1,1,2-Trichloroethane	ND	0.0020	mg/Kg wet							
Trichloroethylene	ND	0.0020	mg/Kg wet							
Trichlorofluoromethane (Freon 11)	ND	0.010	mg/Kg wet							
1,2,3-Trichloropropane	ND	0.0020	mg/Kg wet							
1,2,4-Trimethylbenzene	ND	0.0020	mg/Kg wet							
1,3,5-Trimethylbenzene	ND	0.0020	mg/Kg wet							
Vinyl Chloride	ND	0.010	mg/Kg wet							
m+p Xylene	ND	0.0040	mg/Kg wet							
o-Xylene	ND	0.0020	mg/Kg wet							
Surrogate: 1,2-Dichloroethane-d4	0.0447		mg/Kg wet	0.0500		89.4	70-130			
Surrogate: Toluene-d8	0.0559		mg/Kg wet	0.0500		112	70-130			
Surrogate: 4-Bromofluorobenzene	0.0526		mg/Kg wet	0.0500		105	70-130			

LCS (B196829-BS1)

Prepared & Analyzed: 02/14/18

Acetone	0.178	0.10	mg/Kg wet	0.200		88.8	40-160			†
tert-Amyl Methyl Ether (TAME)	0.0146	0.0010	mg/Kg wet	0.0200		73.1	70-130			
Benzene	0.0189	0.0020	mg/Kg wet	0.0200		94.3	70-130			
Bromobenzene	0.0216	0.0020	mg/Kg wet	0.0200		108	70-130			
Bromochloromethane	0.0208	0.0020	mg/Kg wet	0.0200		104	70-130			
Bromodichloromethane	0.0182	0.0020	mg/Kg wet	0.0200		90.9	70-130			
Bromoform	0.0203	0.0020	mg/Kg wet	0.0200		102	70-130			
Bromomethane	0.0112	0.010	mg/Kg wet	0.0200		56.1	40-160	L-14, R-05, V-34		†
2-Butanone (MEK)	0.156	0.040	mg/Kg wet	0.200		77.8	40-160			†
n-Butylbenzene	0.0229	0.0020	mg/Kg wet	0.0200		114	70-130			
sec-Butylbenzene	0.0204	0.0020	mg/Kg wet	0.0200		102	70-130			
tert-Butylbenzene	0.0188	0.0020	mg/Kg wet	0.0200		94.1	70-130			
tert-Butyl Ethyl Ether (TBEE)	0.0145	0.0010	mg/Kg wet	0.0200		72.5	70-130			
Carbon Disulfide	0.0175	0.0060	mg/Kg wet	0.0200		87.4	70-130			
Carbon Tetrachloride	0.0148	0.0020	mg/Kg wet	0.0200		73.8	70-130			
Chlorobenzene	0.0215	0.0020	mg/Kg wet	0.0200		108	70-130			
Chlorodibromomethane	0.0185	0.0010	mg/Kg wet	0.0200		92.3	70-130			
Chloroethane	0.0158	0.010	mg/Kg wet	0.0200		79.1	70-130			
Chloroform	0.0187	0.0040	mg/Kg wet	0.0200		93.5	70-130			
Chloromethane	0.0147	0.010	mg/Kg wet	0.0200		73.3	40-160			†
2-Chlorotoluene	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130			
4-Chlorotoluene	0.0206	0.0020	mg/Kg wet	0.0200		103	70-130			
1,2-Dibromo-3-chloropropane (DBCP)	0.0183	0.0020	mg/Kg wet	0.0200		91.5	70-130			
1,2-Dibromoethane (EDB)	0.0197	0.0010	mg/Kg wet	0.0200		98.6	70-130			
Dibromomethane	0.0199	0.0020	mg/Kg wet	0.0200		99.5	70-130			
1,2-Dichlorobenzene	0.0214	0.0020	mg/Kg wet	0.0200		107	70-130			
1,3-Dichlorobenzene	0.0220	0.0020	mg/Kg wet	0.0200		110	70-130			
1,4-Dichlorobenzene	0.0211	0.0020	mg/Kg wet	0.0200		106	70-130			

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B196829 - SW-846 5035										
LCS (B196829-BS1)				Prepared & Analyzed: 02/14/18						
Dichlorodifluoromethane (Freon 12)	0.00888	0.010	mg/Kg wet	0.0200		44.4	40-160			L-14, V-05 †
1,1-Dichloroethane	0.0203	0.0020	mg/Kg wet	0.0200		102	70-130			
1,2-Dichloroethane	0.0183	0.0020	mg/Kg wet	0.0200		91.4	70-130			
1,1-Dichloroethylene	0.0180	0.0040	mg/Kg wet	0.0200		90.2	70-130			
cis-1,2-Dichloroethylene	0.0185	0.0020	mg/Kg wet	0.0200		92.6	70-130			
trans-1,2-Dichloroethylene	0.0189	0.0020	mg/Kg wet	0.0200		94.3	70-130			
1,2-Dichloropropane	0.0199	0.0020	mg/Kg wet	0.0200		99.5	70-130			
1,3-Dichloropropane	0.0193	0.0010	mg/Kg wet	0.0200		96.6	70-130			
2,2-Dichloropropane	0.0106	0.0020	mg/Kg wet	0.0200		53.2	* 70-130			L-04, V-05
1,1-Dichloropropene	0.0174	0.0020	mg/Kg wet	0.0200		86.9	70-130			
cis-1,3-Dichloropropene	0.0165	0.0010	mg/Kg wet	0.0200		82.5	70-130			
trans-1,3-Dichloropropene	0.0157	0.0010	mg/Kg wet	0.0200		78.7	70-130			
Diethyl Ether	0.0173	0.010	mg/Kg wet	0.0200		86.4	70-130			
Diisopropyl Ether (DIPE)	0.0179	0.0010	mg/Kg wet	0.0200		89.6	70-130			
1,4-Dioxane	0.208	0.10	mg/Kg wet	0.200		104	40-160			V-16 †
Ethylbenzene	0.0203	0.0020	mg/Kg wet	0.0200		101	70-130			
Hexachlorobutadiene	0.0203	0.0020	mg/Kg wet	0.0200		102	70-130			
2-Hexanone (MBK)	0.195	0.020	mg/Kg wet	0.200		97.3	40-160			†
Isopropylbenzene (Cumene)	0.0218	0.0020	mg/Kg wet	0.0200		109	70-130			
p-Isopropyltoluene (p-Cymene)	0.0205	0.0020	mg/Kg wet	0.0200		102	70-130			
Methyl tert-Butyl Ether (MTBE)	0.0143	0.0040	mg/Kg wet	0.0200		71.4	70-130			
Methylene Chloride	0.0183	0.010	mg/Kg wet	0.0200		91.5	70-130			
4-Methyl-2-pentanone (MIBK)	0.187	0.020	mg/Kg wet	0.200		93.5	40-160			†
Naphthalene	0.0182	0.0040	mg/Kg wet	0.0200		90.8	70-130			
n-Propylbenzene	0.0212	0.0020	mg/Kg wet	0.0200		106	70-130			
Styrene	0.0217	0.0020	mg/Kg wet	0.0200		108	70-130			
1,1,1,2-Tetrachloroethane	0.0199	0.0020	mg/Kg wet	0.0200		99.4	70-130			
1,1,1,2,2-Tetrachloroethane	0.0222	0.0010	mg/Kg wet	0.0200		111	70-130			V-20
Tetrachloroethylene	0.0201	0.0020	mg/Kg wet	0.0200		101	70-130			
Tetrahydrofuran	0.0188	0.010	mg/Kg wet	0.0200		94.1	70-130			
Toluene	0.0194	0.0020	mg/Kg wet	0.0200		96.9	70-130			
1,2,3-Trichlorobenzene	0.0183	0.0020	mg/Kg wet	0.0200		91.3	70-130			
1,2,4-Trichlorobenzene	0.0193	0.0020	mg/Kg wet	0.0200		96.5	70-130			
1,1,1-Trichloroethane	0.0163	0.0020	mg/Kg wet	0.0200		81.7	70-130			
1,1,2-Trichloroethane	0.0195	0.0020	mg/Kg wet	0.0200		97.5	70-130			
Trichloroethylene	0.0191	0.0020	mg/Kg wet	0.0200		95.7	70-130			
Trichlorofluoromethane (Freon 11)	0.0161	0.010	mg/Kg wet	0.0200		80.4	70-130			
1,2,3-Trichloropropane	0.0201	0.0020	mg/Kg wet	0.0200		100	70-130			V-20
1,2,4-Trimethylbenzene	0.0190	0.0020	mg/Kg wet	0.0200		95.0	70-130			
1,3,5-Trimethylbenzene	0.0209	0.0020	mg/Kg wet	0.0200		105	70-130			
Vinyl Chloride	0.0153	0.010	mg/Kg wet	0.0200		76.5	70-130			
m+p Xylene	0.0404	0.0040	mg/Kg wet	0.0400		101	70-130			
o-Xylene	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0491		mg/Kg wet	0.0500		98.1	70-130			
Surrogate: Toluene-d8	0.0552		mg/Kg wet	0.0500		110	70-130			
Surrogate: 4-Bromofluorobenzene	0.0550		mg/Kg wet	0.0500		110	70-130			

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B196829 - SW-846 5035										
LCS Dup (B196829-BSD1)				Prepared & Analyzed: 02/14/18						
Acetone	0.196	0.10	mg/Kg wet	0.200		98.2	40-160	10.0	20	†
tert-Amyl Methyl Ether (TAME)	0.0160	0.0010	mg/Kg wet	0.0200		80.2	70-130	9.26	20	
Benzene	0.0200	0.0020	mg/Kg wet	0.0200		100	70-130	5.87	20	
Bromobenzene	0.0216	0.0020	mg/Kg wet	0.0200		108	70-130	0.370	20	
Bromochloromethane	0.0227	0.0020	mg/Kg wet	0.0200		114	70-130	8.92	20	
Bromodichloromethane	0.0191	0.0020	mg/Kg wet	0.0200		95.6	70-130	5.04	20	
Bromoform	0.0210	0.0020	mg/Kg wet	0.0200		105	70-130	3.10	20	
Bromomethane	0.0156	0.010	mg/Kg wet	0.0200		78.2	40-160	32.9 *	20	R-05, V-34 †
2-Butanone (MEK)	0.172	0.040	mg/Kg wet	0.200		86.2	40-160	10.3	20	†
n-Butylbenzene	0.0231	0.0020	mg/Kg wet	0.0200		115	70-130	0.958	20	
sec-Butylbenzene	0.0203	0.0020	mg/Kg wet	0.0200		102	70-130	0.393	20	
tert-Butylbenzene	0.0188	0.0020	mg/Kg wet	0.0200		94.1	70-130	0.00	20	
tert-Butyl Ethyl Ether (TBEE)	0.0153	0.0010	mg/Kg wet	0.0200		76.7	70-130	5.63	20	
Carbon Disulfide	0.0188	0.0060	mg/Kg wet	0.0200		94.2	70-130	7.49	20	
Carbon Tetrachloride	0.0155	0.0020	mg/Kg wet	0.0200		77.5	70-130	4.89	20	
Chlorobenzene	0.0224	0.0020	mg/Kg wet	0.0200		112	70-130	4.01	20	
Chlorodibromomethane	0.0197	0.0010	mg/Kg wet	0.0200		98.7	70-130	6.70	20	
Chloroethane	0.0166	0.010	mg/Kg wet	0.0200		83.0	70-130	4.81	20	
Chloroform	0.0194	0.0040	mg/Kg wet	0.0200		97.2	70-130	3.88	20	
Chloromethane	0.0163	0.010	mg/Kg wet	0.0200		81.6	40-160	10.7	20	†
2-Chlorotoluene	0.0204	0.0020	mg/Kg wet	0.0200		102	70-130	1.28	20	
4-Chlorotoluene	0.0213	0.0020	mg/Kg wet	0.0200		107	70-130	3.33	20	
1,2-Dibromo-3-chloropropane (DBCP)	0.0190	0.0020	mg/Kg wet	0.0200		95.0	70-130	3.75	20	
1,2-Dibromoethane (EDB)	0.0209	0.0010	mg/Kg wet	0.0200		104	70-130	5.71	20	
Dibromomethane	0.0201	0.0020	mg/Kg wet	0.0200		101	70-130	1.20	20	
1,2-Dichlorobenzene	0.0207	0.0020	mg/Kg wet	0.0200		103	70-130	3.61	20	
1,3-Dichlorobenzene	0.0221	0.0020	mg/Kg wet	0.0200		111	70-130	0.634	20	
1,4-Dichlorobenzene	0.0204	0.0020	mg/Kg wet	0.0200		102	70-130	3.57	20	
Dichlorodifluoromethane (Freon 12)	0.00912	0.010	mg/Kg wet	0.0200		45.6	40-160	2.67	20	L-14, V-05 †
1,1-Dichloroethane	0.0218	0.0020	mg/Kg wet	0.0200		109	70-130	7.12	20	
1,2-Dichloroethane	0.0195	0.0020	mg/Kg wet	0.0200		97.6	70-130	6.56	20	
1,1-Dichloroethylene	0.0196	0.0040	mg/Kg wet	0.0200		97.8	70-130	8.09	20	
cis-1,2-Dichloroethylene	0.0194	0.0020	mg/Kg wet	0.0200		96.8	70-130	4.44	20	
trans-1,2-Dichloroethylene	0.0203	0.0020	mg/Kg wet	0.0200		102	70-130	7.35	20	
1,2-Dichloropropane	0.0219	0.0020	mg/Kg wet	0.0200		110	70-130	9.66	20	
1,3-Dichloropropane	0.0200	0.0010	mg/Kg wet	0.0200		100	70-130	3.46	20	
2,2-Dichloropropane	0.0111	0.0020	mg/Kg wet	0.0200		55.3 *	70-130	3.87	20	L-04, V-05
1,1-Dichloropropene	0.0188	0.0020	mg/Kg wet	0.0200		94.2	70-130	8.06	20	
cis-1,3-Dichloropropene	0.0174	0.0010	mg/Kg wet	0.0200		87.2	70-130	5.54	20	
trans-1,3-Dichloropropene	0.0158	0.0010	mg/Kg wet	0.0200		78.8	70-130	0.127	20	
Diethyl Ether	0.0187	0.010	mg/Kg wet	0.0200		93.5	70-130	7.89	20	
Diisopropyl Ether (DIPE)	0.0192	0.0010	mg/Kg wet	0.0200		95.9	70-130	6.79	20	
1,4-Dioxane	0.233	0.10	mg/Kg wet	0.200		116	40-160	11.2	20	V-16 †
Ethylbenzene	0.0213	0.0020	mg/Kg wet	0.0200		107	70-130	5.19	20	
Hexachlorobutadiene	0.0200	0.0020	mg/Kg wet	0.0200		99.9	70-130	1.69	20	
2-Hexanone (MBK)	0.206	0.020	mg/Kg wet	0.200		103	40-160	5.75	20	†
Isopropylbenzene (Cumene)	0.0224	0.0020	mg/Kg wet	0.0200		112	70-130	2.53	20	
p-Isopropyltoluene (p-Cymene)	0.0205	0.0020	mg/Kg wet	0.0200		103	70-130	0.293	20	
Methyl tert-Butyl Ether (MTBE)	0.0157	0.0040	mg/Kg wet	0.0200		78.5	70-130	9.47	20	
Methylene Chloride	0.0198	0.010	mg/Kg wet	0.0200		99.0	70-130	7.87	20	
4-Methyl-2-pentanone (MIBK)	0.195	0.020	mg/Kg wet	0.200		97.5	40-160	4.19	20	†
Naphthalene	0.0177	0.0040	mg/Kg wet	0.0200		88.3	70-130	2.79	20	

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B196829 - SW-846 5035										
LCS Dup (B196829-BSD1)				Prepared & Analyzed: 02/14/18						
n-Propylbenzene	0.0218	0.0020	mg/Kg wet	0.0200		109	70-130	3.07	20	
Styrene	0.0225	0.0020	mg/Kg wet	0.0200		113	70-130	3.98	20	
1,1,1,2-Tetrachloroethane	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130	1.40	20	
1,1,2,2-Tetrachloroethane	0.0227	0.0010	mg/Kg wet	0.0200		114	70-130	2.23	20	V-20
Tetrachloroethylene	0.0215	0.0020	mg/Kg wet	0.0200		108	70-130	6.63	20	
Tetrahydrofuran	0.0200	0.010	mg/Kg wet	0.0200		100	70-130	6.18	20	
Toluene	0.0205	0.0020	mg/Kg wet	0.0200		103	70-130	5.81	20	
1,2,3-Trichlorobenzene	0.0177	0.0020	mg/Kg wet	0.0200		88.7	70-130	2.89	20	
1,2,4-Trichlorobenzene	0.0188	0.0020	mg/Kg wet	0.0200		94.0	70-130	2.62	20	
1,1,1-Trichloroethane	0.0173	0.0020	mg/Kg wet	0.0200		86.7	70-130	5.94	20	
1,1,2-Trichloroethane	0.0205	0.0020	mg/Kg wet	0.0200		103	70-130	5.19	20	
Trichloroethylene	0.0198	0.0020	mg/Kg wet	0.0200		99.0	70-130	3.39	20	
Trichlorofluoromethane (Freon 11)	0.0168	0.010	mg/Kg wet	0.0200		84.2	70-130	4.62	20	
1,2,3-Trichloropropane	0.0213	0.0020	mg/Kg wet	0.0200		107	70-130	5.98	20	V-20
1,2,4-Trimethylbenzene	0.0192	0.0020	mg/Kg wet	0.0200		95.9	70-130	0.943	20	
1,3,5-Trimethylbenzene	0.0215	0.0020	mg/Kg wet	0.0200		107	70-130	2.45	20	
Vinyl Chloride	0.0167	0.010	mg/Kg wet	0.0200		83.6	70-130	8.87	20	
m+p Xylene	0.0423	0.0040	mg/Kg wet	0.0400		106	70-130	4.69	20	
o-Xylene	0.0207	0.0020	mg/Kg wet	0.0200		104	70-130	2.74	20	
Surrogate: 1,2-Dichloroethane-d4	0.0495		mg/Kg wet	0.0500		99.0	70-130			
Surrogate: Toluene-d8	0.0560		mg/Kg wet	0.0500		112	70-130			
Surrogate: 4-Bromofluorobenzene	0.0554		mg/Kg wet	0.0500		111	70-130			

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QUALITY CONTROL
Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B196770 - SW-846 5030B
Blank (B196770-BLK1)

Prepared: 02/13/18 Analyzed: 02/14/18

Acetone	ND	50	µg/L							
tert-Amyl Methyl Ether (TAME)	ND	0.50	µg/L							
Benzene	ND	1.0	µg/L							
tert-Butyl Alcohol (TBA)	ND	20	µg/L							
Carbon Tetrachloride	ND	2.0	µg/L							
1,2-Dichlorobenzene	ND	2.0	µg/L							
1,3-Dichlorobenzene	ND	2.0	µg/L							
1,4-Dichlorobenzene	ND	2.0	µg/L							
1,2-Dichloroethane	ND	2.0	µg/L							
cis-1,2-Dichloroethylene	ND	1.0	µg/L							
1,1-Dichloroethane	ND	2.0	µg/L							
1,1-Dichloroethylene	ND	2.0	µg/L							
1,4-Dioxane	ND	50	µg/L							
Ethylbenzene	ND	2.0	µg/L							
Methyl tert-Butyl Ether (MTBE)	ND	2.0	µg/L							
Methylene Chloride	ND	5.0	µg/L							
Tetrachloroethylene	ND	2.0	µg/L							
Toluene	ND	1.0	µg/L							
1,1,1-Trichloroethane	ND	2.0	µg/L							
1,1,2-Trichloroethane	ND	2.0	µg/L							
Trichloroethylene	ND	2.0	µg/L							
Vinyl Chloride	ND	2.0	µg/L							
m+p Xylene	ND	2.0	µg/L							
o-Xylene	ND	2.0	µg/L							
Surrogate: 1,2-Dichloroethane-d4	24.0		µg/L	25.0		95.8	70-130			
Surrogate: Toluene-d8	25.0		µg/L	25.0		100	70-130			
Surrogate: 4-Bromofluorobenzene	23.2		µg/L	25.0		92.6	70-130			

LCS (B196770-BS1)

Prepared: 02/13/18 Analyzed: 02/14/18

Acetone	150	50	µg/L	200		75.0	70-160			†
tert-Amyl Methyl Ether (TAME)	20.4	0.50	µg/L	20.0		102	70-130			
Benzene	20.9	1.0	µg/L	20.0		104	37-151			
tert-Butyl Alcohol (TBA)	173	20	µg/L	200		86.4	40-160			†
Carbon Tetrachloride	19.9	2.0	µg/L	20.0		99.4	70-140			
1,2-Dichlorobenzene	19.7	2.0	µg/L	20.0		98.6	18-190			
1,3-Dichlorobenzene	20.4	2.0	µg/L	20.0		102	59-156			
1,4-Dichlorobenzene	19.6	2.0	µg/L	20.0		97.9	18-190			
1,2-Dichloroethane	16.8	2.0	µg/L	20.0		84.2	49-155			
cis-1,2-Dichloroethylene	20.8	1.0	µg/L	20.0		104	70-130			
1,1-Dichloroethane	19.2	2.0	µg/L	20.0		96.1	59-155			
1,1-Dichloroethylene	17.8	2.0	µg/L	20.0		88.9	20-234			
1,4-Dioxane	198	50	µg/L	200		99.2	40-130			†
Ethylbenzene	20.5	2.0	µg/L	20.0		102	37-162			
Methyl tert-Butyl Ether (MTBE)	19.4	2.0	µg/L	20.0		97.2	70-130			
Methylene Chloride	18.6	5.0	µg/L	20.0		92.8	50-221			
Tetrachloroethylene	20.3	2.0	µg/L	20.0		102	64-148			
Toluene	19.8	1.0	µg/L	20.0		99.0	47-150			
1,1,1-Trichloroethane	20.0	2.0	µg/L	20.0		100	52-162			
1,1,2-Trichloroethane	20.4	2.0	µg/L	20.0		102	52-150			
Trichloroethylene	20.1	2.0	µg/L	20.0		100	71-157			
Vinyl Chloride	8.70	2.0	µg/L	20.0		43.5	20-251			
m+p Xylene	40.4	2.0	µg/L	40.0		101	70-130			

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QUALITY CONTROL
Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B196770 - SW-846 5030B
LCS (B196770-BS1)

Prepared: 02/13/18 Analyzed: 02/14/18

o-Xylene	19.9	2.0	µg/L	20.0		99.4	70-130			
Surrogate: 1,2-Dichloroethane-d4	24.2		µg/L	25.0		96.8	70-130			
Surrogate: Toluene-d8	24.8		µg/L	25.0		99.0	70-130			
Surrogate: 4-Bromofluorobenzene	24.0		µg/L	25.0		96.1	70-130			

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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B196704 - SW-846 3546										
Blank (B196704-BLK1)				Prepared & Analyzed: 02/13/18						
Acenaphthene	ND	0.17	mg/Kg wet							
Acenaphthylene	ND	0.17	mg/Kg wet							
Acetophenone	ND	0.34	mg/Kg wet							
Aniline	ND	0.34	mg/Kg wet							L-04, V-34
Anthracene	ND	0.17	mg/Kg wet							
Benzo(a)anthracene	ND	0.17	mg/Kg wet							
Benzo(a)pyrene	ND	0.17	mg/Kg wet							
Benzo(b)fluoranthene	ND	0.17	mg/Kg wet							
Benzo(g,h,i)perylene	ND	0.17	mg/Kg wet							R-05, V-20
Benzo(k)fluoranthene	ND	0.17	mg/Kg wet							
Bis(2-chloroethoxy)methane	ND	0.34	mg/Kg wet							
Bis(2-chloroethyl)ether	ND	0.34	mg/Kg wet							
Bis(2-chloroisopropyl)ether	ND	0.34	mg/Kg wet							
Bis(2-Ethylhexyl)phthalate	ND	0.34	mg/Kg wet							
4-Bromophenylphenylether	ND	0.34	mg/Kg wet							
Butylbenzylphthalate	ND	0.34	mg/Kg wet							R-05
4-Chloroaniline	ND	0.66	mg/Kg wet							V-34
2-Chloronaphthalene	ND	0.34	mg/Kg wet							
2-Chlorophenol	ND	0.34	mg/Kg wet							
Chrysene	ND	0.17	mg/Kg wet							
Dibenz(a,h)anthracene	ND	0.17	mg/Kg wet							
Dibenzofuran	ND	0.34	mg/Kg wet							
Di-n-butylphthalate	ND	0.34	mg/Kg wet							V-20
1,2-Dichlorobenzene	ND	0.34	mg/Kg wet							
1,3-Dichlorobenzene	ND	0.34	mg/Kg wet							
1,4-Dichlorobenzene	ND	0.34	mg/Kg wet							
3,3-Dichlorobenzidine	ND	0.17	mg/Kg wet							V-34
2,4-Dichlorophenol	ND	0.34	mg/Kg wet							
Diethylphthalate	ND	0.34	mg/Kg wet							
2,4-Dimethylphenol	ND	0.34	mg/Kg wet							
Dimethylphthalate	ND	0.34	mg/Kg wet							V-20
2,4-Dinitrophenol	ND	0.66	mg/Kg wet							V-04
2,4-Dinitrotoluene	ND	0.34	mg/Kg wet							
2,6-Dinitrotoluene	ND	0.34	mg/Kg wet							
Di-n-octylphthalate	ND	0.34	mg/Kg wet							V-20
1,2-Diphenylhydrazine (as Azobenzene)	ND	0.34	mg/Kg wet							
Fluoranthene	ND	0.17	mg/Kg wet							
Fluorene	ND	0.17	mg/Kg wet							
Hexachlorobenzene	ND	0.34	mg/Kg wet							
Hexachlorobutadiene	ND	0.34	mg/Kg wet							
Hexachloroethane	ND	0.34	mg/Kg wet							
Indeno(1,2,3-cd)pyrene	ND	0.17	mg/Kg wet							
Isophorone	ND	0.34	mg/Kg wet							
2-Methylnaphthalene	ND	0.17	mg/Kg wet							
2-Methylphenol	ND	0.34	mg/Kg wet							
3/4-Methylphenol	ND	0.34	mg/Kg wet							
Naphthalene	ND	0.17	mg/Kg wet							
Nitrobenzene	ND	0.34	mg/Kg wet							
2-Nitrophenol	ND	0.34	mg/Kg wet							
4-Nitrophenol	ND	0.66	mg/Kg wet							
Pentachlorophenol	ND	0.34	mg/Kg wet							
Phenanthrene	ND	0.17	mg/Kg wet							

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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B196704 - SW-846 3546										
Blank (B196704-BLK1)										
Prepared & Analyzed: 02/13/18										
Phenol	ND	0.34	mg/Kg wet							
Pyrene	ND	0.17	mg/Kg wet							R-05
1,2,4-Trichlorobenzene	ND	0.34	mg/Kg wet							
2,4,5-Trichlorophenol	ND	0.34	mg/Kg wet							
2,4,6-Trichlorophenol	ND	0.34	mg/Kg wet							
Surrogate: 2-Fluorophenol	4.08		mg/Kg wet	6.67		61.2	30-130			
Surrogate: Phenol-d6	4.24		mg/Kg wet	6.67		63.5	30-130			
Surrogate: Nitrobenzene-d5	2.33		mg/Kg wet	3.33		70.0	30-130			
Surrogate: 2-Fluorobiphenyl	2.19		mg/Kg wet	3.33		65.7	30-130			
Surrogate: 2,4,6-Tribromophenol	3.47		mg/Kg wet	6.67		52.1	30-130			
Surrogate: p-Terphenyl-d14	3.02		mg/Kg wet	3.33		90.7	30-130			
LCS (B196704-BS1)										
Prepared & Analyzed: 02/13/18										
Acenaphthene	0.944	0.17	mg/Kg wet	1.67		56.7	40-140			
Acenaphthylene	0.910	0.17	mg/Kg wet	1.67		54.6	40-140			
Acetophenone	0.887	0.34	mg/Kg wet	1.67		53.2	40-140			
Aniline	0.611	0.34	mg/Kg wet	1.67		36.6 *	40-140			L-04, V-34
Anthracene	1.01	0.17	mg/Kg wet	1.67		60.4	40-140			
Benzo(a)anthracene	0.962	0.17	mg/Kg wet	1.67		57.7	40-140			
Benzo(a)pyrene	0.994	0.17	mg/Kg wet	1.67		59.7	40-140			
Benzo(b)fluoranthene	1.10	0.17	mg/Kg wet	1.67		66.2	40-140			
Benzo(g,h,i)perylene	1.09	0.17	mg/Kg wet	1.67		65.5	40-140			R-05, V-06
Benzo(k)fluoranthene	1.19	0.17	mg/Kg wet	1.67		71.5	40-140			
Bis(2-chloroethoxy)methane	1.08	0.34	mg/Kg wet	1.67		64.5	40-140			
Bis(2-chloroethyl)ether	0.994	0.34	mg/Kg wet	1.67		59.6	40-140			
Bis(2-chloroisopropyl)ether	0.983	0.34	mg/Kg wet	1.67		59.0	40-140			
Bis(2-Ethylhexyl)phthalate	0.991	0.34	mg/Kg wet	1.67		59.5	40-140			
4-Bromophenylphenylether	1.02	0.34	mg/Kg wet	1.67		61.2	40-140			
Butylbenzylphthalate	0.832	0.34	mg/Kg wet	1.67		49.9	40-140			R-05
4-Chloroaniline	0.539	0.66	mg/Kg wet	1.67		32.3	15-140			V-34 †
2-Chloronaphthalene	0.864	0.34	mg/Kg wet	1.67		51.8	40-140			
2-Chlorophenol	0.937	0.34	mg/Kg wet	1.67		56.2	30-130			
Chrysene	0.932	0.17	mg/Kg wet	1.67		55.9	40-140			
Dibenz(a,h)anthracene	0.988	0.17	mg/Kg wet	1.67		59.3	40-140			
Dibenzofuran	0.955	0.34	mg/Kg wet	1.67		57.3	40-140			
Di-n-butylphthalate	1.18	0.34	mg/Kg wet	1.67		71.0	40-140			V-06
1,2-Dichlorobenzene	0.857	0.34	mg/Kg wet	1.67		51.4	40-140			
1,3-Dichlorobenzene	0.807	0.34	mg/Kg wet	1.67		48.4	40-140			
1,4-Dichlorobenzene	0.782	0.34	mg/Kg wet	1.67		46.9	40-140			
3,3-Dichlorobenzidine	0.702	0.17	mg/Kg wet	1.67		42.1	40-140			V-34
2,4-Dichlorophenol	0.898	0.34	mg/Kg wet	1.67		53.9	30-130			
Diethylphthalate	0.988	0.34	mg/Kg wet	1.67		59.3	40-140			
2,4-Dimethylphenol	1.02	0.34	mg/Kg wet	1.67		61.2	30-130			
Dimethylphthalate	0.999	0.34	mg/Kg wet	1.67		59.9	40-140			V-06
2,4-Dinitrophenol	0.261	0.66	mg/Kg wet	1.67		15.7	15-140			V-04 †
2,4-Dinitrotoluene	0.945	0.34	mg/Kg wet	1.67		56.7	40-140			
2,6-Dinitrotoluene	0.993	0.34	mg/Kg wet	1.67		59.6	40-140			
Di-n-octylphthalate	1.30	0.34	mg/Kg wet	1.67		78.1	40-140			V-06
1,2-Diphenylhydrazine (as Azobenzene)	1.11	0.34	mg/Kg wet	1.67		66.6	40-140			
Fluoranthene	1.15	0.17	mg/Kg wet	1.67		69.1	40-140			
Fluorene	0.922	0.17	mg/Kg wet	1.67		55.3	40-140			
Hexachlorobenzene	0.969	0.34	mg/Kg wet	1.67		58.2	40-140			

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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B196704 - SW-846 3546										
LCS (B196704-BS1)										
Prepared & Analyzed: 02/13/18										
Hexachlorobutadiene	0.848	0.34	mg/Kg wet	1.67		50.9	40-140			
Hexachloroethane	0.790	0.34	mg/Kg wet	1.67		47.4	40-140			
Indeno(1,2,3-cd)pyrene	1.03	0.17	mg/Kg wet	1.67		61.8	40-140			
Isophorone	1.11	0.34	mg/Kg wet	1.67		66.6	40-140			
2-Methylnaphthalene	0.923	0.17	mg/Kg wet	1.67		55.4	40-140			
2-Methylphenol	0.870	0.34	mg/Kg wet	1.67		52.2	30-130			
3/4-Methylphenol	0.913	0.34	mg/Kg wet	1.67		54.8	30-130			
Naphthalene	0.879	0.17	mg/Kg wet	1.67		52.7	40-140			
Nitrobenzene	0.914	0.34	mg/Kg wet	1.67		54.9	40-140			
2-Nitrophenol	0.980	0.34	mg/Kg wet	1.67		58.8	30-130			
4-Nitrophenol	1.11	0.66	mg/Kg wet	1.67		66.7	15-140			†
Pentachlorophenol	0.859	0.34	mg/Kg wet	1.67		51.5	30-130			
Phenanthrene	0.998	0.17	mg/Kg wet	1.67		59.9	40-140			
Phenol	0.972	0.34	mg/Kg wet	1.67		58.3	15-140			†
Pyrene	0.837	0.17	mg/Kg wet	1.67		50.2	40-140			R-05
1,2,4-Trichlorobenzene	0.888	0.34	mg/Kg wet	1.67		53.3	40-140			
2,4,5-Trichlorophenol	0.904	0.34	mg/Kg wet	1.67		54.2	30-130			
2,4,6-Trichlorophenol	0.978	0.34	mg/Kg wet	1.67		58.7	30-130			
Surrogate: 2-Fluorophenol	4.39		mg/Kg wet	6.67		65.8	30-130			
Surrogate: Phenol-d6	3.93		mg/Kg wet	6.67		59.0	30-130			
Surrogate: Nitrobenzene-d5	2.00		mg/Kg wet	3.33		59.9	30-130			
Surrogate: 2-Fluorobiphenyl	2.17		mg/Kg wet	3.33		65.2	30-130			
Surrogate: 2,4,6-Tribromophenol	3.93		mg/Kg wet	6.67		59.0	30-130			
Surrogate: p-Terphenyl-d14	1.72		mg/Kg wet	3.33		51.7	30-130			
LCS Dup (B196704-BSD1)										
Prepared & Analyzed: 02/13/18										
Acenaphthene	0.963	0.17	mg/Kg wet	1.67		57.8	40-140	1.96	30	
Acenaphthylene	0.924	0.17	mg/Kg wet	1.67		55.4	40-140	1.53	30	
Acetophenone	0.921	0.34	mg/Kg wet	1.67		55.3	40-140	3.83	30	
Aniline	0.510	0.34	mg/Kg wet	1.67		30.6	* 40-140	18.0	30	L-04, V-34
Anthracene	0.984	0.17	mg/Kg wet	1.67		59.0	40-140	2.31	30	
Benzo(a)anthracene	0.993	0.17	mg/Kg wet	1.67		59.6	40-140	3.21	30	
Benzo(a)pyrene	1.00	0.17	mg/Kg wet	1.67		60.2	40-140	0.835	30	
Benzo(b)fluoranthene	0.988	0.17	mg/Kg wet	1.67		59.3	40-140	11.0	30	
Benzo(g,h,i)perylene	0.730	0.17	mg/Kg wet	1.67		43.8	40-140	39.7	* 30	R-05, V-06
Benzo(k)fluoranthene	0.981	0.17	mg/Kg wet	1.67		58.8	40-140	19.5	30	
Bis(2-chloroethoxy)methane	0.915	0.34	mg/Kg wet	1.67		54.9	40-140	16.1	30	
Bis(2-chloroethyl)ether	0.863	0.34	mg/Kg wet	1.67		51.8	40-140	14.0	30	
Bis(2-chloroisopropyl)ether	1.00	0.34	mg/Kg wet	1.67		60.0	40-140	1.75	30	
Bis(2-Ethylhexyl)phthalate	1.17	0.34	mg/Kg wet	1.67		70.3	40-140	16.6	30	
4-Bromophenylphenylether	1.05	0.34	mg/Kg wet	1.67		62.8	40-140	2.48	30	
Butylbenzylphthalate	1.36	0.34	mg/Kg wet	1.67		81.4	40-140	48.0	* 30	R-05
4-Chloroaniline	0.531	0.66	mg/Kg wet	1.67		31.9	15-140	1.50	30	V-34 †
2-Chloronaphthalene	0.839	0.34	mg/Kg wet	1.67		50.3	40-140	2.90	30	
2-Chlorophenol	0.806	0.34	mg/Kg wet	1.67		48.4	30-130	15.0	30	
Chrysene	0.956	0.17	mg/Kg wet	1.67		57.4	40-140	2.61	30	
Dibenz(a,h)anthracene	0.799	0.17	mg/Kg wet	1.67		47.9	40-140	21.2	30	
Dibenzofuran	0.970	0.34	mg/Kg wet	1.67		58.2	40-140	1.56	30	
Di-n-butylphthalate	1.11	0.34	mg/Kg wet	1.67		66.7	40-140	6.30	30	V-06
1,2-Dichlorobenzene	0.801	0.34	mg/Kg wet	1.67		48.1	40-140	6.71	30	
1,3-Dichlorobenzene	0.694	0.34	mg/Kg wet	1.67		41.6	40-140	15.1	30	
1,4-Dichlorobenzene	0.778	0.34	mg/Kg wet	1.67		46.7	40-140	0.556	30	

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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B196704 - SW-846 3546

LCS Dup (B196704-BSD1)

Prepared & Analyzed: 02/13/18

3,3-Dichlorobenzidine	0.681	0.17	mg/Kg wet	1.67		40.9	40-140	3.04	30	V-34
2,4-Dichlorophenol	0.839	0.34	mg/Kg wet	1.67		50.3	30-130	6.76	30	
Diethylphthalate	1.05	0.34	mg/Kg wet	1.67		63.3	40-140	6.53	30	
2,4-Dimethylphenol	0.849	0.34	mg/Kg wet	1.67		51.0	30-130	18.2	30	
Dimethylphthalate	1.06	0.34	mg/Kg wet	1.67		63.5	40-140	5.77	30	V-06
2,4-Dinitrophenol	0.238	0.66	mg/Kg wet	1.67		14.3 *	15-140	9.49	30	L-07, V-04 †
2,4-Dinitrotoluene	1.00	0.34	mg/Kg wet	1.67		60.0	40-140	5.69	30	
2,6-Dinitrotoluene	1.02	0.34	mg/Kg wet	1.67		61.0	40-140	2.32	30	
Di-n-octylphthalate	1.11	0.34	mg/Kg wet	1.67		66.4	40-140	16.3	30	V-06
1,2-Diphenylhydrazine (as Azobenzene)	1.17	0.34	mg/Kg wet	1.67		70.4	40-140	5.63	30	
Fluoranthene	1.00	0.17	mg/Kg wet	1.67		60.0	40-140	14.0	30	
Fluorene	0.939	0.17	mg/Kg wet	1.67		56.3	40-140	1.79	30	
Hexachlorobenzene	0.996	0.34	mg/Kg wet	1.67		59.7	40-140	2.68	30	
Hexachlorobutadiene	0.805	0.34	mg/Kg wet	1.67		48.3	40-140	5.20	30	
Hexachloroethane	0.837	0.34	mg/Kg wet	1.67		50.2	40-140	5.82	30	
Indeno(1,2,3-cd)pyrene	0.781	0.17	mg/Kg wet	1.67		46.9	40-140	27.4	30	
Isophorone	0.950	0.34	mg/Kg wet	1.67		57.0	40-140	15.4	30	
2-Methylnaphthalene	0.848	0.17	mg/Kg wet	1.67		50.9	40-140	8.47	30	
2-Methylphenol	0.924	0.34	mg/Kg wet	1.67		55.4	30-130	6.02	30	
3/4-Methylphenol	0.979	0.34	mg/Kg wet	1.67		58.8	30-130	7.01	30	
Naphthalene	0.853	0.17	mg/Kg wet	1.67		51.2	40-140	2.96	30	
Nitrobenzene	0.870	0.34	mg/Kg wet	1.67		52.2	40-140	4.97	30	
2-Nitrophenol	0.731	0.34	mg/Kg wet	1.67		43.9	30-130	29.1	30	
4-Nitrophenol	1.04	0.66	mg/Kg wet	1.67		62.3	15-140	6.73	30	†
Pentachlorophenol	0.772	0.34	mg/Kg wet	1.67		46.3	30-130	10.6	30	
Phenanthrene	0.982	0.17	mg/Kg wet	1.67		58.9	40-140	1.65	30	
Phenol	0.891	0.34	mg/Kg wet	1.67		53.4	15-140	8.77	30	†
Pyrene	1.15	0.17	mg/Kg wet	1.67		69.2	40-140	31.8 *	30	R-05
1,2,4-Trichlorobenzene	0.768	0.34	mg/Kg wet	1.67		46.1	40-140	14.5	30	
2,4,5-Trichlorophenol	0.876	0.34	mg/Kg wet	1.67		52.6	30-130	3.07	30	
2,4,6-Trichlorophenol	0.972	0.34	mg/Kg wet	1.67		58.3	30-130	0.616	30	
Surrogate: 2-Fluorophenol	3.67		mg/Kg wet	6.67		55.1	30-130			
Surrogate: Phenol-d6	3.81		mg/Kg wet	6.67		57.2	30-130			
Surrogate: Nitrobenzene-d5	1.92		mg/Kg wet	3.33		57.7	30-130			
Surrogate: 2-Fluorobiphenyl	2.07		mg/Kg wet	3.33		62.2	30-130			
Surrogate: 2,4,6-Tribromophenol	3.96		mg/Kg wet	6.67		59.4	30-130			
Surrogate: p-Terphenyl-d14	2.61		mg/Kg wet	3.33		78.4	30-130			

Batch B196787 - SW-846 3510C

Blank (B196787-BLK1)

Prepared & Analyzed: 02/13/18

Benzo(a)anthracene	ND	0.050	µg/L							
Benzo(a)pyrene	ND	0.10	µg/L							
Benzo(b)fluoranthene	ND	0.050	µg/L							
Benzo(k)fluoranthene	ND	0.20	µg/L							
Bis(2-Ethylhexyl)phthalate	0.10	1.0	µg/L							Ja
Chrysene	ND	0.20	µg/L							
Dibenz(a,h)anthracene	ND	0.20	µg/L							
Indeno(1,2,3-cd)pyrene	ND	0.20	µg/L							
Pentachlorophenol	ND	1.0	µg/L							
Surrogate: 2-Fluorophenol	120		µg/L	200		59.8	15-110			
Surrogate: Phenol-d6	79.8		µg/L	200		39.9	15-110			

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QUALITY CONTROL
Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B196787 - SW-846 3510C										
Blank (B196787-BLK1)										
Prepared & Analyzed: 02/13/18										
Surrogate: Nitrobenzene-d5	77.0		µg/L	100		77.0	30-130			
Surrogate: 2-Fluorobiphenyl	76.2		µg/L	100		76.2	30-130			
Surrogate: 2,4,6-Tribromophenol	198		µg/L	200		98.9	15-110			
Surrogate: p-Terphenyl-d14	63.2		µg/L	100		63.2	30-130			
LCS (B196787-BS1)										
Prepared & Analyzed: 02/13/18										
Benzo(a)anthracene	41.4	1.2	µg/L	50.0		82.8	40-140			
Benzo(a)pyrene	43.9	2.5	µg/L	50.0		87.8	40-140			
Benzo(b)fluoranthene	43.1	1.2	µg/L	50.0		86.2	40-140			
Benzo(k)fluoranthene	43.4	5.0	µg/L	50.0		86.7	40-140			
Bis(2-Ethylhexyl)phthalate	50.0	25	µg/L	50.0		100	40-140			
Chrysene	37.5	5.0	µg/L	50.0		75.0	40-140			
Dibenz(a,h)anthracene	48.5	5.0	µg/L	50.0		97.0	40-140			
Indeno(1,2,3-cd)pyrene	46.6	5.0	µg/L	50.0		93.2	40-140			
Pentachlorophenol	39.7	25	µg/L	50.0		79.4	30-130			
Surrogate: 2-Fluorophenol	124		µg/L	200		61.8	15-110			
Surrogate: Phenol-d6	85.0		µg/L	200		42.5	15-110			
Surrogate: Nitrobenzene-d5	84.2		µg/L	100		84.2	30-130			
Surrogate: 2-Fluorobiphenyl	92.6		µg/L	100		92.6	30-130			
Surrogate: 2,4,6-Tribromophenol	207		µg/L	200		103	15-110			
Surrogate: p-Terphenyl-d14	66.0		µg/L	100		66.0	30-130			
LCS Dup (B196787-BSD1)										
Prepared & Analyzed: 02/13/18										
Benzo(a)anthracene	43.9	1.2	µg/L	50.0		87.8	40-140	5.87	20	
Benzo(a)pyrene	47.2	2.5	µg/L	50.0		94.4	40-140	7.30	20	
Benzo(b)fluoranthene	46.6	1.2	µg/L	50.0		93.3	40-140	7.85	20	
Benzo(k)fluoranthene	47.2	5.0	µg/L	50.0		94.4	40-140	8.50	20	
Bis(2-Ethylhexyl)phthalate	53.7	25	µg/L	50.0		107	40-140	7.09	20	
Chrysene	40.1	5.0	µg/L	50.0		80.2	40-140	6.70	20	
Dibenz(a,h)anthracene	52.2	5.0	µg/L	50.0		104	40-140	7.50	20	
Indeno(1,2,3-cd)pyrene	49.8	5.0	µg/L	50.0		99.6	40-140	6.69	50	‡
Pentachlorophenol	42.2	25	µg/L	50.0		84.4	30-130	6.11	50	‡
Surrogate: 2-Fluorophenol	133		µg/L	200		66.3	15-110			
Surrogate: Phenol-d6	90.7		µg/L	200		45.3	15-110			
Surrogate: Nitrobenzene-d5	91.3		µg/L	100		91.3	30-130			
Surrogate: 2-Fluorobiphenyl	99.1		µg/L	100		99.1	30-130			
Surrogate: 2,4,6-Tribromophenol	219		µg/L	200		109	15-110			
Surrogate: p-Terphenyl-d14	71.3		µg/L	100		71.3	30-130			

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QUALITY CONTROL

Semivolatile Organic Compounds by - GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B196705 - SW-846 3510C										
Blank (B196705-BLK1)				Prepared & Analyzed: 02/13/18						
Acenaphthene	ND	5.0	µg/L							
Acenaphthylene	ND	5.0	µg/L							
Anthracene	ND	5.0	µg/L							
Benzidine	ND	20	µg/L							V-05
Benzo(g,h,i)perylene	ND	5.0	µg/L							V-20
4-Bromophenylphenylether	ND	10	µg/L							
Butylbenzylphthalate	ND	10	µg/L							
4-Chloro-3-methylphenol	ND	10	µg/L							
Bis(2-chloroethyl)ether	ND	10	µg/L							
Bis(2-chloroisopropyl)ether	ND	10	µg/L							
2-Chloronaphthalene	ND	10	µg/L							
2-Chlorophenol	ND	10	µg/L							
4-Chlorophenylphenylether	ND	10	µg/L							
Di-n-butylphthalate	ND	10	µg/L							V-20
1,3-Dichlorobenzene	ND	5.0	µg/L							
1,4-Dichlorobenzene	ND	5.0	µg/L							
1,2-Dichlorobenzene	ND	5.0	µg/L							
3,3-Dichlorobenzidine	ND	10	µg/L							V-34
2,4-Dichlorophenol	ND	10	µg/L							
Diethylphthalate	ND	10	µg/L							
2,4-Dimethylphenol	ND	10	µg/L							
Dimethylphthalate	ND	10	µg/L							V-20
4,6-Dinitro-2-methylphenol	ND	10	µg/L							
2,4-Dinitrophenol	ND	10	µg/L							V-04
2,4-Dinitrotoluene	ND	10	µg/L							
2,6-Dinitrotoluene	ND	10	µg/L							
Di-n-octylphthalate	ND	10	µg/L							V-20
1,2-Diphenylhydrazine (as Azobenzene)	ND	10	µg/L							
Bis(2-Ethylhexyl)phthalate	ND	10	µg/L							V-20
Fluoranthene	ND	5.0	µg/L							
Fluorene	ND	5.0	µg/L							
Hexachlorobenzene	ND	10	µg/L							
Hexachlorobutadiene	ND	10	µg/L							
Hexachlorocyclopentadiene	ND	10	µg/L							V-19
Hexachloroethane	ND	10	µg/L							
Isophorone	ND	10	µg/L							
Naphthalene	ND	5.0	µg/L							
Nitrobenzene	ND	10	µg/L							
2-Nitrophenol	ND	10	µg/L							
4-Nitrophenol	ND	10	µg/L							
N-Nitrosodimethylamine	ND	10	µg/L							
N-Nitrosodiphenylamine	ND	10	µg/L							
N-Nitrosodi-n-propylamine	ND	10	µg/L							
Pentachlorophenol	ND	10	µg/L							
2-Methylnaphthalene	ND	5.0	µg/L							
Phenanthrene	ND	5.0	µg/L							
2-Methylphenol	ND	10	µg/L							
Phenol	ND	10	µg/L							
3/4-Methylphenol	ND	10	µg/L							
Pyrene	ND	5.0	µg/L							
1,2,4-Trichlorobenzene	ND	5.0	µg/L							
2,4,6-Trichlorophenol	ND	10	µg/L							

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QUALITY CONTROL

Semivolatile Organic Compounds by - GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B196705 - SW-846 3510C

Blank (B196705-BLK1)

Prepared & Analyzed: 02/13/18

Surrogate: 2-Fluorophenol	110		µg/L	200		54.9	15-110			
Surrogate: Phenol-d6	82.6		µg/L	200		41.3	15-110			
Surrogate: Nitrobenzene-d5	72.6		µg/L	100		72.6	30-130			
Surrogate: 2-Fluorobiphenyl	81.8		µg/L	100		81.8	30-130			
Surrogate: 2,4,6-Tribromophenol	167		µg/L	200		83.3	15-110			
Surrogate: p-Terphenyl-d14	97.5		µg/L	100		97.5	30-130			

LCS (B196705-BS1)

Prepared & Analyzed: 02/13/18

Acenaphthene	39.5	5.0	µg/L	50.0		79.0	47-145			
Acenaphthylene	36.9	5.0	µg/L	50.0		73.8	33-145			
Anthracene	40.6	5.0	µg/L	50.0		81.1	27-133			
Benzidine	34.2	20	µg/L	50.0		68.3	40-140			V-05
Benzo(g,h,i)perylene	42.2	5.0	µg/L	50.0		84.4	1-219			V-20
4-Bromophenylphenylether	40.9	10	µg/L	50.0		81.8	53-127			
Butylbenzylphthalate	47.2	10	µg/L	50.0		94.4	1-152			
4-Chloro-3-methylphenol	43.8	10	µg/L	50.0		87.6	22-147			
Bis(2-chloroethyl)ether	38.6	10	µg/L	50.0		77.1	12-158			
Bis(2-chloroisopropyl)ether	42.2	10	µg/L	50.0		84.5	36-166			
2-Chloronaphthalene	32.2	10	µg/L	50.0		64.4	60-118			
2-Chlorophenol	37.4	10	µg/L	50.0		74.8	23-134			
4-Chlorophenylphenylether	37.1	10	µg/L	50.0		74.2	25-158			
Di-n-butylphthalate	44.4	10	µg/L	50.0		88.7	1-118			V-20
1,3-Dichlorobenzene	34.9	5.0	µg/L	50.0		69.8	1-172			
1,4-Dichlorobenzene	35.2	5.0	µg/L	50.0		70.4	20-124			
1,2-Dichlorobenzene	35.6	5.0	µg/L	50.0		71.1	32-129			
3,3-Dichlorobenzidine	43.0	10	µg/L	50.0		86.0	1-262			V-34
2,4-Dichlorophenol	38.4	10	µg/L	50.0		76.8	39-135			
Diethylphthalate	41.8	10	µg/L	50.0		83.6	1-114			
2,4-Dimethylphenol	41.6	10	µg/L	50.0		83.2	32-119			
Dimethylphthalate	41.6	10	µg/L	50.0		83.3	1-112			V-20
4,6-Dinitro-2-methylphenol	36.2	10	µg/L	50.0		72.4	1-181			
2,4-Dinitrophenol	31.3	10	µg/L	50.0		62.6	1-191			V-04
2,4-Dinitrotoluene	40.4	10	µg/L	50.0		80.8	39-139			
2,6-Dinitrotoluene	40.3	10	µg/L	50.0		80.6	50-158			
Di-n-octylphthalate	49.7	10	µg/L	50.0		99.4	4-146			V-20
1,2-Diphenylhydrazine (as Azobenzene)	46.4	10	µg/L	50.0		92.8	40-140			
Bis(2-Ethylhexyl)phthalate	46.4	10	µg/L	50.0		92.8	8-158			V-20
Fluoranthene	38.6	5.0	µg/L	50.0		77.3	26-137			
Fluorene	38.3	5.0	µg/L	50.0		76.7	59-121			
Hexachlorobenzene	40.1	10	µg/L	50.0		80.3	1-152			
Hexachlorobutadiene	36.9	10	µg/L	50.0		73.8	24-116			
Hexachlorocyclopentadiene	29.5	10	µg/L	50.0		59.0	40-140			V-19
Hexachloroethane	39.8	10	µg/L	50.0		79.5	40-113			
Isophorone	45.3	10	µg/L	50.0		90.6	21-196			
Naphthalene	38.5	5.0	µg/L	50.0		76.9	21-133			
Nitrobenzene	42.0	10	µg/L	50.0		84.0	35-180			
2-Nitrophenol	38.9	10	µg/L	50.0		77.9	29-182			
4-Nitrophenol	26.6	10	µg/L	50.0		53.1	1-132			
N-Nitrosodimethylamine	29.5	10	µg/L	50.0		58.9	40-140			
N-Nitrosodiphenylamine	50.0	10	µg/L	50.0		99.9	40-140			
N-Nitrosodi-n-propylamine	42.4	10	µg/L	50.0		84.9	1-230			
Pentachlorophenol	33.2	10	µg/L	50.0		66.3	14-176			

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QUALITY CONTROL
Semivolatile Organic Compounds by - GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B196705 - SW-846 3510C										
LCS (B196705-BS1)				Prepared & Analyzed: 02/13/18						
2-Methylnaphthalene	42.3	5.0	µg/L	50.0		84.6	40-140			
Phenanthrene	40.7	5.0	µg/L	50.0		81.4	54-120			
2-Methylphenol	33.5	10	µg/L	50.0		67.1	30-130			
Phenol	21.3	10	µg/L	50.0		42.6	5-112			
3/4-Methylphenol	35.3	10	µg/L	50.0		70.6	30-130			
Pyrene	40.4	5.0	µg/L	50.0		80.9	52-115			
1,2,4-Trichlorobenzene	35.4	5.0	µg/L	50.0		70.8	44-142			
2,4,6-Trichlorophenol	36.2	10	µg/L	50.0		72.4	37-144			
Surrogate: 2-Fluorophenol	116		µg/L	200		58.0	15-110			
Surrogate: Phenol-d6	76.7		µg/L	200		38.3	15-110			
Surrogate: Nitrobenzene-d5	92.1		µg/L	100		92.1	30-130			
Surrogate: 2-Fluorobiphenyl	82.2		µg/L	100		82.2	30-130			
Surrogate: 2,4,6-Tribromophenol	165		µg/L	200		82.6	15-110			
Surrogate: p-Terphenyl-d14	88.6		µg/L	100		88.6	30-130			
LCS Dup (B196705-BSD1)				Prepared & Analyzed: 02/13/18						
Acenaphthene	38.9	5.0	µg/L	50.0		77.7	47-145	1.58		
Acenaphthylene	37.4	5.0	µg/L	50.0		74.7	33-145	1.18		
Anthracene	39.8	5.0	µg/L	50.0		79.6	27-133	1.92		
Benzidine	53.3	20	µg/L	50.0		107	40-140	43.7		V-05
Benzo(g,h,i)perylene	44.9	5.0	µg/L	50.0		89.7	1-219	6.16		V-20
4-Bromophenylphenylether	42.1	10	µg/L	50.0		84.2	53-127	2.87		
Butylbenzylphthalate	48.9	10	µg/L	50.0		97.8	1-152	3.58		
4-Chloro-3-methylphenol	40.3	10	µg/L	50.0		80.5	22-147	8.45		
Bis(2-chloroethyl)ether	38.0	10	µg/L	50.0		76.1	12-158	1.38		
Bis(2-chloroisopropyl)ether	37.6	10	µg/L	50.0		75.3	36-166	11.5		
2-Chloronaphthalene	45.2	10	µg/L	50.0		90.3	60-118	33.6		
2-Chlorophenol	38.5	10	µg/L	50.0		77.0	23-134	2.90		
4-Chlorophenylphenylether	36.7	10	µg/L	50.0		73.5	25-158	0.975		
Di-n-butylphthalate	46.3	10	µg/L	50.0		92.6	1-118	4.26		V-20
1,3-Dichlorobenzene	37.6	5.0	µg/L	50.0		75.2	1-172	7.51		
1,4-Dichlorobenzene	36.2	5.0	µg/L	50.0		72.3	20-124	2.78		
1,2-Dichlorobenzene	32.9	5.0	µg/L	50.0		65.8	32-129	7.74		
3,3-Dichlorobenzidine	43.2	10	µg/L	50.0		86.4	1-262	0.487		V-34
2,4-Dichlorophenol	32.2	10	µg/L	50.0		64.4	39-135	17.7		
Diethylphthalate	41.1	10	µg/L	50.0		82.2	1-114	1.74		
2,4-Dimethylphenol	33.5	10	µg/L	50.0		67.0	32-119	21.6		
Dimethylphthalate	47.8	10	µg/L	50.0		95.6	1-112	13.8		V-20
4,6-Dinitro-2-methylphenol	33.3	10	µg/L	50.0		66.6	1-181	8.26		
2,4-Dinitrophenol	28.0	10	µg/L	50.0		56.1	1-191	11.0		V-04
2,4-Dinitrotoluene	37.6	10	µg/L	50.0		75.1	39-139	7.34		
2,6-Dinitrotoluene	39.9	10	µg/L	50.0		79.7	50-158	1.05		
Di-n-octylphthalate	51.6	10	µg/L	50.0		103	4-146	3.79		V-20
1,2-Diphenylhydrazine (as Azobenzene)	46.6	10	µg/L	50.0		93.1	40-140	0.366		
Bis(2-Ethylhexyl)phthalate	49.6	10	µg/L	50.0		99.3	8-158	6.75		V-20
Fluoranthene	38.8	5.0	µg/L	50.0		77.6	26-137	0.362		
Fluorene	36.3	5.0	µg/L	50.0		72.6	59-121	5.44		
Hexachlorobenzene	40.8	10	µg/L	50.0		81.7	1-152	1.70		
Hexachlorobutadiene	40.0	10	µg/L	50.0		80.0	24-116	8.06		
Hexachlorocyclopentadiene	36.6	10	µg/L	50.0		73.3	40-140	21.5		V-19
Hexachloroethane	36.3	10	µg/L	50.0		72.6	40-113	9.02		
Isophorone	39.2	10	µg/L	50.0		78.5	21-196	14.3		

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QUALITY CONTROL
Semivolatile Organic Compounds by - GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B196705 - SW-846 3510C										
LCS Dup (B196705-BSD1)				Prepared & Analyzed: 02/13/18						
Naphthalene	38.8	5.0	µg/L	50.0		77.6	21-133	0.829		
Nitrobenzene	38.4	10	µg/L	50.0		76.9	35-180	8.88		
2-Nitrophenol	32.4	10	µg/L	50.0		64.9	29-182	18.2		
4-Nitrophenol	22.9	10	µg/L	50.0		45.8	1-132	14.8		
N-Nitrosodimethylamine	19.2	10	µg/L	50.0		38.4	* 40-140	42.2		L-07
N-Nitrosodiphenylamine	50.0	10	µg/L	50.0		99.9	40-140	0.0400		
N-Nitrosodi-n-propylamine	38.6	10	µg/L	50.0		77.3	1-230	9.35		
Pentachlorophenol	32.8	10	µg/L	50.0		65.5	14-176	1.18		
2-Methylnaphthalene	40.0	5.0	µg/L	50.0		80.1	40-140	5.49	20	
Phenanthrene	39.2	5.0	µg/L	50.0		78.5	54-120	3.60		
2-Methylphenol	29.5	10	µg/L	50.0		59.1	30-130	12.7	20	
Phenol	18.1	10	µg/L	50.0		36.1	5-112	16.4		
3/4-Methylphenol	28.9	10	µg/L	50.0		57.9	30-130	19.8	20	
Pyrene	41.4	5.0	µg/L	50.0		82.7	52-115	2.27		
1,2,4-Trichlorobenzene	31.2	5.0	µg/L	50.0		62.4	44-142	12.6		
2,4,6-Trichlorophenol	44.0	10	µg/L	50.0		88.0	37-144	19.4		
Surrogate: 2-Fluorophenol	97.6		µg/L	200		48.8	15-110			
Surrogate: Phenol-d6	68.4		µg/L	200		34.2	15-110			
Surrogate: Nitrobenzene-d5	80.9		µg/L	100		80.9	30-130			
Surrogate: 2-Fluorobiphenyl	101		µg/L	100		101	30-130			
Surrogate: 2,4,6-Tribromophenol	156		µg/L	200		77.9	15-110			
Surrogate: p-Terphenyl-d14	95.9		µg/L	100		95.9	30-130			

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QUALITY CONTROL
Polychlorinated Biphenyls By GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B196707 - SW-846 3546										
Blank (B196707-BLK1)										
Prepared & Analyzed: 02/13/18										
Aroclor-1016	ND	0.020	mg/Kg wet							
Aroclor-1016 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1221	ND	0.020	mg/Kg wet							
Aroclor-1221 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1232	ND	0.020	mg/Kg wet							
Aroclor-1232 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1242	ND	0.020	mg/Kg wet							
Aroclor-1242 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1248	ND	0.020	mg/Kg wet							
Aroclor-1248 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1254	ND	0.020	mg/Kg wet							
Aroclor-1254 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1260	ND	0.020	mg/Kg wet							
Aroclor-1260 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1262	ND	0.020	mg/Kg wet							
Aroclor-1262 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1268	ND	0.020	mg/Kg wet							
Aroclor-1268 [2C]	ND	0.020	mg/Kg wet							
Surrogate: Decachlorobiphenyl	0.212		mg/Kg wet	0.200		106	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.201		mg/Kg wet	0.200		101	30-150			
Surrogate: Tetrachloro-m-xylene	0.187		mg/Kg wet	0.200		93.6	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.192		mg/Kg wet	0.200		96.1	30-150			
LCS (B196707-BS1)										
Prepared & Analyzed: 02/13/18										
Aroclor-1016	0.20	0.020	mg/Kg wet	0.200		98.5	40-140			
Aroclor-1016 [2C]	0.21	0.020	mg/Kg wet	0.200		103	40-140			
Aroclor-1260	0.18	0.020	mg/Kg wet	0.200		89.3	40-140			
Aroclor-1260 [2C]	0.18	0.020	mg/Kg wet	0.200		87.7	40-140			
Surrogate: Decachlorobiphenyl	0.222		mg/Kg wet	0.200		111	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.212		mg/Kg wet	0.200		106	30-150			
Surrogate: Tetrachloro-m-xylene	0.193		mg/Kg wet	0.200		96.7	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.197		mg/Kg wet	0.200		98.7	30-150			
LCS Dup (B196707-BSD1)										
Prepared: 02/13/18 Analyzed: 02/14/18										
Aroclor-1016	0.19	0.020	mg/Kg wet	0.200		96.2	40-140	2.38	30	
Aroclor-1016 [2C]	0.20	0.020	mg/Kg wet	0.200		99.8	40-140	3.57	30	
Aroclor-1260	0.18	0.020	mg/Kg wet	0.200		89.3	40-140	0.00784	30	
Aroclor-1260 [2C]	0.17	0.020	mg/Kg wet	0.200		84.2	40-140	4.16	30	
Surrogate: Decachlorobiphenyl	0.215		mg/Kg wet	0.200		108	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.204		mg/Kg wet	0.200		102	30-150			
Surrogate: Tetrachloro-m-xylene	0.184		mg/Kg wet	0.200		92.0	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.188		mg/Kg wet	0.200		93.9	30-150			

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QUALITY CONTROL

Polychlorinated Biphenyls By GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B196794 - SW-846 3510C										
Blank (B196794-BLK1)										
Prepared & Analyzed: 02/14/18										
Aroclor-1016	ND	0.10	µg/L							
Aroclor-1016 [2C]	ND	0.10	µg/L							
Aroclor-1221	ND	0.10	µg/L							
Aroclor-1221 [2C]	ND	0.10	µg/L							
Aroclor-1232	ND	0.10	µg/L							
Aroclor-1232 [2C]	ND	0.10	µg/L							
Aroclor-1242	ND	0.10	µg/L							
Aroclor-1242 [2C]	ND	0.10	µg/L							
Aroclor-1248	ND	0.10	µg/L							
Aroclor-1248 [2C]	ND	0.10	µg/L							
Aroclor-1254	ND	0.10	µg/L							
Aroclor-1254 [2C]	ND	0.10	µg/L							
Aroclor-1260	ND	0.10	µg/L							
Aroclor-1260 [2C]	ND	0.10	µg/L							
Surrogate: Decachlorobiphenyl	1.19		µg/L	2.00		59.7	30-150			
Surrogate: Decachlorobiphenyl [2C]	1.49		µg/L	2.00		74.7	30-150			
Surrogate: Tetrachloro-m-xylene	1.55		µg/L	2.00		77.6	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	1.71		µg/L	2.00		85.4	30-150			
LCS (B196794-BS1)										
Prepared & Analyzed: 02/14/18										
Aroclor-1016	0.46	0.20	µg/L	0.500		91.0	50-114			
Aroclor-1016 [2C]	0.45	0.20	µg/L	0.500		90.6	50-114			
Aroclor-1260	0.43	0.20	µg/L	0.500		85.0	8-127			
Aroclor-1260 [2C]	0.40	0.20	µg/L	0.500		79.9	8-127			
Surrogate: Decachlorobiphenyl	1.47		µg/L	2.00		73.6	30-150			
Surrogate: Decachlorobiphenyl [2C]	1.80		µg/L	2.00		90.0	30-150			
Surrogate: Tetrachloro-m-xylene	1.54		µg/L	2.00		77.2	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	1.65		µg/L	2.00		82.7	30-150			
LCS Dup (B196794-BSD1)										
Prepared & Analyzed: 02/14/18										
Aroclor-1016	0.49	0.20	µg/L	0.500		97.7	50-114	7.09		
Aroclor-1016 [2C]	0.51	0.20	µg/L	0.500		103	50-114	12.8		
Aroclor-1260	0.45	0.20	µg/L	0.500		90.0	8-127	5.66		
Aroclor-1260 [2C]	0.42	0.20	µg/L	0.500		84.6	8-127	5.76		
Surrogate: Decachlorobiphenyl	1.56		µg/L	2.00		77.8	30-150			
Surrogate: Decachlorobiphenyl [2C]	1.91		µg/L	2.00		95.7	30-150			
Surrogate: Tetrachloro-m-xylene	1.60		µg/L	2.00		80.0	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	1.72		µg/L	2.00		85.8	30-150			

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QUALITY CONTROL
Petroleum Hydrocarbons Analyses - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B196790 - SW-846 3546										
Blank (B196790-BLK1)										
					Prepared: 02/13/18 Analyzed: 02/14/18					
TPH (C9-C36)	ND	8.3	mg/Kg wet							
Surrogate: o-Terphenyl	2.70		mg/Kg wet	3.33		80.9	40-140			
LCS (B196790-BS1)										
					Prepared: 02/13/18 Analyzed: 02/14/18					
TPH (C9-C36)	24.6	8.3	mg/Kg wet	33.3		73.9	40-140			
Surrogate: o-Terphenyl	2.82		mg/Kg wet	3.33		84.6	40-140			
LCS Dup (B196790-BSD1)										
					Prepared: 02/13/18 Analyzed: 02/14/18					
TPH (C9-C36)	24.9	8.3	mg/Kg wet	33.3		74.7	40-140	1.01	30	
Surrogate: o-Terphenyl	2.87		mg/Kg wet	3.33		86.1	40-140			

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QUALITY CONTROL
Petroleum Hydrocarbons Analyses - EPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B196793 - SW-846 3510C
Blank (B196793-BLK1)

Prepared & Analyzed: 02/14/18

C9-C18 Aliphatics	ND	100	µg/L							
C19-C36 Aliphatics	ND	100	µg/L							
Unadjusted C11-C22 Aromatics	ND	100	µg/L							
C11-C22 Aromatics	ND	100	µg/L							
Acenaphthene	ND	2.0	µg/L							
Acenaphthylene	ND	2.0	µg/L							
Anthracene	ND	2.0	µg/L							
Benzo(a)anthracene	ND	2.0	µg/L							
Benzo(a)pyrene	ND	2.0	µg/L							
Benzo(b)fluoranthene	ND	2.0	µg/L							
Benzo(g,h,i)perylene	ND	2.0	µg/L							
Benzo(k)fluoranthene	ND	2.0	µg/L							
Chrysene	ND	2.0	µg/L							
Dibenz(a,h)anthracene	ND	2.0	µg/L							
Fluoranthene	ND	2.0	µg/L							
Fluorene	ND	2.0	µg/L							
Indeno(1,2,3-cd)pyrene	ND	2.0	µg/L							
2-Methylnaphthalene	ND	2.0	µg/L							
Naphthalene	ND	2.0	µg/L							
Phenanthrene	ND	2.0	µg/L							
Pyrene	ND	2.0	µg/L							
n-Decane	ND	2.0	µg/L							
n-Docosane	ND	2.0	µg/L							
n-Dodecane	ND	2.0	µg/L							
n-Eicosane	ND	2.0	µg/L							
n-Hexacosane	ND	2.0	µg/L							
n-Hexadecane	ND	2.0	µg/L							
n-Hexatriacontane	ND	2.0	µg/L							
n-Nonadecane	ND	2.0	µg/L							
n-Nonane	ND	2.0	µg/L							
n-Octacosane	ND	2.0	µg/L							
n-Octadecane	ND	2.0	µg/L							
n-Tetracosane	ND	2.0	µg/L							
n-Tetradecane	ND	2.0	µg/L							
n-Triacontane	ND	2.0	µg/L							
Naphthalene-aliphatic fraction	ND	2.0	µg/L							
2-Methylnaphthalene-aliphatic fraction	ND	2.0	µg/L							
Surrogate: Chlorooctadecane (COD)	95.9		µg/L	99.8		96.1	40-140			
Surrogate: o-Terphenyl (OTP)	86.2		µg/L	100		86.2	40-140			
Surrogate: 2-Bromonaphthalene	88.3		µg/L	100		88.0	40-140			
Surrogate: 2-Fluorobiphenyl	94.5		µg/L	105		90.2	40-140			

LCS (B196793-BS1)

Prepared & Analyzed: 02/14/18

C9-C18 Aliphatics	492	100	µg/L	600		82.0	0-200			
C19-C36 Aliphatics	783	100	µg/L	800		97.8	0-200			
Acenaphthene	76.3	2.0	µg/L	100		76.3	40-140			
Acenaphthylene	76.0	2.0	µg/L	100		76.0	40-140			
Anthracene	83.8	2.0	µg/L	100		83.8	40-140			
Benzo(a)anthracene	85.8	2.0	µg/L	100		85.8	40-140			
Benzo(a)pyrene	79.7	2.0	µg/L	100		79.7	40-140			
Benzo(b)fluoranthene	85.1	2.0	µg/L	100		85.1	40-140			
Benzo(g,h,i)perylene	81.4	2.0	µg/L	100		81.4	40-140			

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QUALITY CONTROL
Petroleum Hydrocarbons Analyses - EPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B196793 - SW-846 3510C
LCS (B196793-BS1)

Prepared & Analyzed: 02/14/18

Benzo(k)fluoranthene	83.3	2.0	µg/L	100		83.3	40-140			
Chrysene	85.9	2.0	µg/L	100		85.9	40-140			
Dibenz(a,h)anthracene	85.0	2.0	µg/L	100		85.0	40-140			
Fluoranthene	84.8	2.0	µg/L	100		84.8	40-140			
Fluorene	80.9	2.0	µg/L	100		80.9	40-140			
Indeno(1,2,3-cd)pyrene	79.5	2.0	µg/L	100		79.5	40-140			
2-Methylnaphthalene	78.1	2.0	µg/L	100		78.1	40-140			
Naphthalene	69.2	2.0	µg/L	100		69.2	40-140			
Phenanthrene	85.3	2.0	µg/L	100		85.3	40-140			
Pyrene	85.6	2.0	µg/L	100		85.6	40-140			
n-Decane	58.7	2.0	µg/L	100		58.7	40-140			
n-Docosane	95.4	2.0	µg/L	100		95.4	40-140			
n-Dodecane	66.9	2.0	µg/L	100		66.9	40-140			
n-Eicosane	93.7	2.0	µg/L	100		93.7	40-140			
n-Hexacosane	93.8	2.0	µg/L	100		93.8	40-140			
n-Hexadecane	84.8	2.0	µg/L	100		84.8	40-140			
n-Hexatriacontane	79.0	2.0	µg/L	100		79.0	40-140			
n-Nonadecane	90.5	2.0	µg/L	100		90.5	40-140			
n-Nonane	48.2	2.0	µg/L	100		48.2	30-140			
n-Octacosane	89.1	2.0	µg/L	100		89.1	40-140			
n-Octadecane	92.3	2.0	µg/L	100		92.3	40-140			
n-Tetracosane	94.6	2.0	µg/L	100		94.6	40-140			
n-Tetradecane	77.8	2.0	µg/L	100		77.8	40-140			
n-Triacontane	85.1	2.0	µg/L	100		85.1	40-140			
Naphthalene-aliphatic fraction	1.10	2.0	µg/L	100		1.10	0-5			
2-Methylnaphthalene-aliphatic fraction	ND	2.0	µg/L	100			0-5			
Surrogate: Chlorooctadecane (COD)	96.0		µg/L	99.8		96.2	40-140			
Surrogate: o-Terphenyl (OTP)	85.7		µg/L	100		85.7	40-140			
Surrogate: 2-Bromonaphthalene	86.7		µg/L	100		86.3	40-140			
Surrogate: 2-Fluorobiphenyl	93.5		µg/L	105		89.2	40-140			

LCS Dup (B196793-BS1)

Prepared & Analyzed: 02/14/18

C9-C18 Aliphatics	522	100	µg/L	600		87.0	0-200	5.90		
C19-C36 Aliphatics	829	100	µg/L	800		104	0-200	5.74		
Acenaphthene	79.8	2.0	µg/L	100		79.8	40-140	4.43	25	
Acenaphthylene	79.3	2.0	µg/L	100		79.3	40-140	4.26	25	
Anthracene	86.7	2.0	µg/L	100		86.7	40-140	3.40	25	
Benzo(a)anthracene	88.6	2.0	µg/L	100		88.6	40-140	3.23	25	
Benzo(a)pyrene	82.2	2.0	µg/L	100		82.2	40-140	3.09	25	
Benzo(b)fluoranthene	87.5	2.0	µg/L	100		87.5	40-140	2.73	25	
Benzo(g,h,i)perylene	84.5	2.0	µg/L	100		84.5	40-140	3.76	25	
Benzo(k)fluoranthene	86.3	2.0	µg/L	100		86.3	40-140	3.57	25	
Chrysene	88.8	2.0	µg/L	100		88.8	40-140	3.26	25	
Dibenz(a,h)anthracene	88.4	2.0	µg/L	100		88.4	40-140	3.94	25	
Fluoranthene	87.8	2.0	µg/L	100		87.8	40-140	3.43	25	
Fluorene	84.2	2.0	µg/L	100		84.2	40-140	4.04	25	
Indeno(1,2,3-cd)pyrene	82.9	2.0	µg/L	100		82.9	40-140	4.20	25	
2-Methylnaphthalene	81.6	2.0	µg/L	100		81.6	40-140	4.48	25	
Naphthalene	72.2	2.0	µg/L	100		72.2	40-140	4.29	25	
Phenanthrene	88.5	2.0	µg/L	100		88.5	40-140	3.73	25	
Pyrene	88.4	2.0	µg/L	100		88.4	40-140	3.30	25	
n-Decane	61.6	2.0	µg/L	100		61.6	40-140	4.72	25	

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QUALITY CONTROL
Petroleum Hydrocarbons Analyses - EPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B196793 - SW-846 3510C
LCS Dup (B196793-BSD1)

Prepared & Analyzed: 02/14/18

n-Docosane	101	2.0	µg/L	100		101	40-140	6.15	25	
n-Dodecane	71.2	2.0	µg/L	100		71.2	40-140	6.16	25	
n-Eicosane	99.9	2.0	µg/L	100		99.9	40-140	6.39	25	
n-Hexacosane	100	2.0	µg/L	100		100	40-140	6.57	25	
n-Hexadecane	90.3	2.0	µg/L	100		90.3	40-140	6.26	25	
n-Hexatriacontane	84.1	2.0	µg/L	100		84.1	40-140	6.26	25	
n-Nonadecane	96.5	2.0	µg/L	100		96.5	40-140	6.48	25	
n-Nonane	49.9	2.0	µg/L	100		49.9	30-140	3.38	25	
n-Octacosane	95.1	2.0	µg/L	100		95.1	40-140	6.48	25	
n-Octadecane	98.3	2.0	µg/L	100		98.3	40-140	6.21	25	
n-Tetracosane	101	2.0	µg/L	100		101	40-140	6.68	25	
n-Tetradecane	83.2	2.0	µg/L	100		83.2	40-140	6.71	25	
n-Triacontane	90.7	2.0	µg/L	100		90.7	40-140	6.33	25	
Naphthalene-aliphatic fraction	ND	2.0	µg/L	100			0-5			
2-Methylnaphthalene-aliphatic fraction	ND	2.0	µg/L	100			0-5			
Surrogate: Chlorooctadecane (COD)	101		µg/L	99.8		101	40-140			
Surrogate: o-Terphenyl (OTP)	88.1		µg/L	100		88.1	40-140			
Surrogate: 2-Bromonaphthalene	89.9		µg/L	100		89.5	40-140			
Surrogate: 2-Fluorobiphenyl	94.7		µg/L	105		90.4	40-140			

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QUALITY CONTROL
Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B196773 - SW-846 7471
Blank (B196773-BLK1)

Prepared & Analyzed: 02/14/18

Mercury	ND	0.025	mg/Kg wet							
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LCS (B196773-BS1)

Prepared & Analyzed: 02/14/18

Mercury	12.2	2.0	mg/Kg wet	9.36		130	* 73.7-126.3			L-07
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LCS Dup (B196773-BSD1)

Prepared & Analyzed: 02/14/18

Mercury	9.66	2.0	mg/Kg wet	9.36		103	73.7-126.3	23.3	30	
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Batch B196818 - SW-846 3051
Blank (B196818-BLK1)

Prepared & Analyzed: 02/14/18

Arsenic	ND	1.7	mg/Kg wet							
Barium	ND	1.7	mg/Kg wet							
Cadmium	ND	0.17	mg/Kg wet							
Chromium	ND	0.33	mg/Kg wet							
Lead	ND	0.50	mg/Kg wet							
Selenium	ND	3.3	mg/Kg wet							
Silver	ND	0.33	mg/Kg wet							

LCS (B196818-BS1)

Prepared & Analyzed: 02/14/18

Arsenic	140	5.0	mg/Kg wet	147		95.4	83-117			
Barium	321	5.0	mg/Kg wet	314		102	82.2-117.8			
Cadmium	181	0.50	mg/Kg wet	193		94.0	82.4-117.6			
Chromium	91.4	1.0	mg/Kg wet	82.6		111	81.8-118.2			
Lead	92.1	1.5	mg/Kg wet	92.3		99.7	82.8-117			
Selenium	170	10	mg/Kg wet	187		90.8	79.1-121.4			
Silver	40.2	1.0	mg/Kg wet	40.7		98.8	79.6-120.4			

LCS Dup (B196818-BSD1)

Prepared & Analyzed: 02/14/18

Arsenic	148	5.1	mg/Kg wet	147		101	83-117	5.68	30	
Barium	311	5.1	mg/Kg wet	314		99.0	82.2-117.8	3.07	30	
Cadmium	182	0.51	mg/Kg wet	193		94.2	82.4-117.6	0.126	30	
Chromium	84.4	1.0	mg/Kg wet	82.6		102	81.8-118.2	7.98	30	
Lead	103	1.5	mg/Kg wet	92.3		111	82.8-117	10.9	30	
Selenium	168	10	mg/Kg wet	187		90.0	79.1-121.4	0.820	30	
Silver	40.4	1.0	mg/Kg wet	40.7		99.3	79.6-120.4	0.564	30	

MRL Check (B196818-MRL1)

Prepared & Analyzed: 02/14/18

Lead	0.604	0.50	mg/Kg wet	0.495		122	* 80-120			M-10
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Batch B196821 - EPA 200.7
Blank (B196821-BLK1)

Prepared: 02/14/18 Analyzed: 02/15/18

Iron	ND	0.050	mg/L							
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QUALITY CONTROL
Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B196821 - EPA 200.7										
LCS (B196821-BS1)				Prepared: 02/14/18 Analyzed: 02/15/18						
Iron	4.14	0.050	mg/L	4.00		104	85-115			
LCS Dup (B196821-BSD1)				Prepared: 02/14/18 Analyzed: 02/15/18						
Iron	4.14	0.050	mg/L	4.00		103	85-115	0.0310	20	
Duplicate (B196821-DUP1)				Source: 18B0481-03		Prepared: 02/14/18 Analyzed: 02/15/18				
Iron	11.9	0.050	mg/L		12.1			1.91	20	
Matrix Spike (B196821-MS1)				Source: 18B0481-03		Prepared: 02/14/18 Analyzed: 02/15/18				
Iron	16.2	0.050	mg/L	4.00	12.1	103	70-130			
Batch B196822 - EPA 200.8										
Blank (B196822-BLK1)				Prepared: 02/14/18 Analyzed: 02/15/18						
Antimony	ND	1.0	µg/L							
Arsenic	ND	1.0	µg/L							
Cadmium	ND	0.20	µg/L							
Chromium	ND	10	µg/L							
Copper	ND	1.0	µg/L							
Lead	ND	0.50	µg/L							
Nickel	ND	5.0	µg/L							
Selenium	ND	5.0	µg/L							
Silver	ND	0.20	µg/L							
Zinc	ND	20	µg/L							
LCS (B196822-BS1)				Prepared: 02/14/18 Analyzed: 02/15/18						
Antimony	430	10	µg/L	500		86.0	85-115			
Arsenic	506	10	µg/L	500		101	85-115			
Cadmium	516	2.0	µg/L	500		103	85-115			
Chromium	506	100	µg/L	500		101	85-115			
Copper	1000	10	µg/L	1000		100	85-115			
Lead	506	5.0	µg/L	500		101	85-115			
Nickel	499	50	µg/L	500		99.8	85-115			
Selenium	493	50	µg/L	500		98.6	85-115			
Silver	496	2.0	µg/L	500		99.3	85-115			
Zinc	1030	200	µg/L	1000		103	85-115			
LCS Dup (B196822-BSD1)				Prepared: 02/14/18 Analyzed: 02/15/18						
Antimony	461	10	µg/L	500		92.2	85-115	7.01	20	
Arsenic	528	10	µg/L	500		106	85-115	4.32	20	
Cadmium	538	2.0	µg/L	500		108	85-115	4.25	20	
Chromium	522	100	µg/L	500		104	85-115	3.08	20	
Copper	1030	10	µg/L	1000		103	85-115	2.76	20	
Lead	525	5.0	µg/L	500		105	85-115	3.85	20	
Nickel	517	50	µg/L	500		103	85-115	3.57	20	
Selenium	521	50	µg/L	500		104	85-115	5.64	20	
Silver	522	2.0	µg/L	500		104	85-115	5.12	20	
Zinc	1060	200	µg/L	1000		106	85-115	2.88	20	

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QUALITY CONTROL
Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B196822 - EPA 200.8

Duplicate (B196822-DUP1)		Source: 18B0481-03		Prepared: 02/14/18 Analyzed: 02/15/18						
Antimony	ND	5.0	µg/L		ND		NC	20		DL-15
Arsenic	ND	5.0	µg/L		ND		NC	20		DL-15
Cadmium	ND	1.0	µg/L		ND		NC	20		DL-15
Chromium	ND	50	µg/L		ND		NC	20		DL-15
Copper	17.5	5.0	µg/L		18.2		4.36	20		DL-15
Lead	15.5	2.5	µg/L		16.0		3.14	20		DL-15
Nickel	ND	25	µg/L		ND		NC	20		DL-15
Selenium	ND	25	µg/L		ND		NC	20		DL-15
Silver	ND	1.0	µg/L		ND		NC	20		DL-15
Zinc	ND	100	µg/L		ND		NC	20		DL-15

Matrix Spike (B196822-MS1)		Source: 18B0481-03		Prepared: 02/14/18 Analyzed: 02/15/18						
Antimony	550	10	µg/L	500	1.02	110	70-130			
Arsenic	541	10	µg/L	500	ND	108	70-130			
Cadmium	491	2.0	µg/L	500	ND	98.2	70-130			
Chromium	555	100	µg/L	500	ND	111	70-130			
Copper	1020	10	µg/L	1000	18.2	100	70-130			
Lead	575	5.0	µg/L	500	16.0	112	70-130			
Nickel	522	50	µg/L	500	7.03	103	70-130			
Selenium	494	50	µg/L	500	ND	98.9	70-130			
Silver	471	2.0	µg/L	500	ND	94.3	70-130			
Zinc	972	200	µg/L	1000	ND	97.2	70-130			

Batch B196827 - EPA 245.1

Blank (B196827-BLK1)		Prepared: 02/14/18 Analyzed: 02/15/18								
Mercury	ND	0.00010	mg/L							
LCS (B196827-BS1)		Prepared: 02/14/18 Analyzed: 02/15/18								
Mercury	0.00197	0.00010	mg/L	0.00200	98.4	85-115				
LCS Dup (B196827-BSD1)		Prepared: 02/14/18 Analyzed: 02/15/18								
Mercury	0.00192	0.00010	mg/L	0.00200	96.2	85-115	2.19	20		

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QUALITY CONTROL
Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B196792 - % Solids										
Duplicate (B196792-DUP1)	Source: 18B0481-01			Prepared: 02/13/18 Analyzed: 02/14/18						
% Solids	89.3		% Wt		89.9			0.708	20	
Batch B196804 - SM21-22 3500 Cr B										
Blank (B196804-BLK1)	Prepared & Analyzed: 02/13/18									
Hexavalent Chromium	ND	0.0040	mg/L							
LCS (B196804-BS1)	Prepared & Analyzed: 02/13/18									
Hexavalent Chromium	0.098	0.0040	mg/L	0.100		98.3	86.6-115			
LCS Dup (B196804-BSD1)	Prepared & Analyzed: 02/13/18									
Hexavalent Chromium	0.092	0.0040	mg/L	0.100		92.4	86.6-115	6.21	6.61	
Batch B196805 - SM21-22 4500 CL G										
Blank (B196805-BLK1)	Prepared & Analyzed: 02/13/18									
Chlorine, Residual	ND	0.020	mg/L							
LCS (B196805-BS1)	Prepared & Analyzed: 02/13/18									
Chlorine, Residual	1.2	0.020	mg/L	1.30		93.8	82.5-130			
LCS Dup (B196805-BSD1)	Prepared & Analyzed: 02/13/18									
Chlorine, Residual	1.2	0.020	mg/L	1.30		94.4	82.5-130	0.642	6.2	
Batch B196838 - SM21-22 2510B Modified										
Blank (B196838-BLK1)	Prepared & Analyzed: 02/14/18									
Specific conductance	ND	2.0	µmhos/cm							
LCS (B196838-BS1)	Prepared & Analyzed: 02/14/18									
Specific conductance	190		µmhos/cm	192		101	89.2-110			
Batch B196885 - SW-846 9014										
Blank (B196885-BLK1)	Prepared: 02/14/18 Analyzed: 02/15/18									
Reactive Cyanide	ND	0.40	mg/Kg							
LCS (B196885-BS1)	Prepared: 02/14/18 Analyzed: 02/15/18									
Reactive Cyanide	9.4	0.40	mg/Kg	10.0		94.4	85.9-110			

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QUALITY CONTROL
Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B196886 - SW-846 9030A										
Blank (B196886-BLK1)				Prepared: 02/14/18 Analyzed: 02/15/18						
Reactive Sulfide	ND	2.0	mg/Kg							
LCS (B196886-BS1)				Prepared: 02/14/18 Analyzed: 02/15/18						
Reactive Sulfide	12	2.0	mg/Kg	14.8		81.1	64.5-120			
Batch B196908 - EPA 1664B										
Blank (B196908-BLK1)				Prepared & Analyzed: 02/15/18						
Silica Gel Treated HEM (SGT-HEM)	ND	1.4	mg/L							
LCS (B196908-BS1)				Prepared & Analyzed: 02/15/18						
Silica Gel Treated HEM (SGT-HEM)	11		mg/L	10.0		114	64-132			
Duplicate (B196908-DUP1)				Source: 18B0481-04			Prepared & Analyzed: 02/15/18			
Silica Gel Treated HEM (SGT-HEM)	ND	1.5	mg/L		ND			NC	18	
Matrix Spike (B196908-MS1)				Source: 18B0481-04			Prepared & Analyzed: 02/15/18			
Silica Gel Treated HEM (SGT-HEM)	100	14	mg/L	100	ND	104	64-132			
Batch B196911 - SM21-22 2540D										
Blank (B196911-BLK1)				Prepared & Analyzed: 02/15/18						
Total Suspended Solids	ND	2.5	mg/L							
LCS (B196911-BS1)				Prepared & Analyzed: 02/15/18						
Total Suspended Solids	188	20	mg/L	200		94.0	66.7-117			
Duplicate (B196911-DUP1)				Source: 18B0481-04			Prepared & Analyzed: 02/15/18			
Total Suspended Solids	1200	12	mg/L		1200			3.87	5	

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QUALITY CONTROL
Drinking Water Organics EPA 504.1 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B196834 - EPA 504 water
Blank (B196834-BLK1)

Prepared & Analyzed: 02/14/18

1,2-Dibromoethane (EDB)	ND	0.021	µg/L							
1,2-Dibromoethane (EDB) [2C]	ND	0.021	µg/L							

LCS (B196834-BS1)

Prepared & Analyzed: 02/14/18

1,2-Dibromoethane (EDB)	0.155	0.020	µg/L	0.177		88.0	70-130			
1,2-Dibromoethane (EDB) [2C]	0.188	0.020	µg/L	0.177		106	70-130			

LCS Dup (B196834-BSD1)

Prepared & Analyzed: 02/14/18

1,2-Dibromoethane (EDB)	0.154	0.021	µg/L	0.181		85.1	70-130	0.907		
1,2-Dibromoethane (EDB) [2C]	0.194	0.021	µg/L	0.181		107	70-130	3.46		

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
DL-15	Sample required a dilution due to low internal standard recovery of the lesser diluted digestion, reporting limit is elevated.
J	[Undefined]
Ja	Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated concentration (CLP J-Flag).
L-04	Laboratory fortified blank/laboratory control sample recovery and duplicate recovery are outside of control limits. Reported value for this compound is likely to be biased on the low side.
L-07	Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.
L-14	Compound classified by MA CAM as difficult with acceptable recoveries of 40-160%. Recovery does not meet 70-130% criteria but does meet difficult compound criteria.
M-10	The reporting limit verification for the AIHA lead program is outside of control limits for this element. Any reported result at or near the detection limit may be biased on the high side.
O-32	A dilution was performed as part of the standard analytical procedure.
R-05	Laboratory fortified blank duplicate RPD is outside of control limits. Reduced precision is anticipated for any reported value for this compound.
V-04	Initial calibration did not meet method specifications. Compound was calibrated using a response factor where %RSD is outside of method specified criteria. Reported result is estimated.
V-05	Continuing calibration did not meet method specifications and was biased on the low side for this compound. Reported result is estimated.
V-06	Continuing calibration did not meet method specifications and was biased on the high side for this compound. Reported result is estimated.
V-16	Response factor is less than method specified minimum acceptable value. Reduced precision and accuracy may be associated with reported result.
V-19	Initial calibration did not meet method specifications. Compound was calibrated using linear regression with correlation coefficient <0.99. Reported result is estimated.
V-20	Continuing calibration did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.
V-34	Initial calibration verification (ICV) did not meet method specifications and was biased on the low side for this compound. Reported result is estimated.
Z-01	SM4500 test had a calibration point outside acceptable back calculated recovery. Reanalysis yielded similar non-conformance.

CERTIFICATIONS
Certified Analyses included in this Report

Analyte	Certifications
<i>EPA 200.7 in Water</i>	
Iron	CT,MA,NH,NY,RI,NC,ME,VA
<i>EPA 200.8 in Water</i>	
Antimony	CT,MA,NH,NY,RI,NC,ME,VA
Arsenic	CT,MA,NH,NY,RI,NC,ME,VA
Cadmium	CT,MA,NH,NY,RI,NC,ME,VA
Chromium	CT,MA,NH,NY,RI,NC,ME,VA
Copper	CT,MA,NH,NY,RI,NC,ME,VA
Lead	CT,MA,NH,NY,RI,NC,ME,VA
Nickel	CT,MA,NH,NY,RI,NC,ME,VA
Selenium	CT,MA,NH,NY,RI,NC,ME,VA
Silver	CT,MA,NH,NY,RI,NC,ME,VA
Zinc	CT,MA,NH,NY,RI,NC,ME,VA
<i>EPA 245.1 in Water</i>	
Mercury	CT,MA,NH,RI,NY,NC,ME,VA
<i>EPA 300.0 in Water</i>	
Chloride	NC,NY,MA,VA,ME,NH,CT,RI
<i>EPA 608 in Water</i>	
Aroclor-1016	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1016 [2C]	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1221	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1221 [2C]	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1232	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1232 [2C]	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1242	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1242 [2C]	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1248	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1248 [2C]	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1254	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1254 [2C]	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1260	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1260 [2C]	CT,MA,NH,NY,RI,NC,ME,VA
<i>EPA 624 in Water</i>	
Acetone	NH,NY
Benzene	CT,MA,NH,NY,RI,NC,ME,VA
Bromodichloromethane	CT,MA,NH,NY,RI,NC,ME,VA
Bromoform	CT,MA,NH,NY,RI,NC,ME,VA
Bromomethane	CT,MA,NH,NY,RI,NC,ME,VA
Carbon Tetrachloride	CT,MA,NH,NY,RI,NC,ME,VA
Chlorobenzene	CT,MA,NH,NY,RI,NC,ME,VA
Chlorodibromomethane	CT,MA,NH,NY,RI,NC,ME,VA
Chloroethane	CT,MA,NH,NY,RI,NC,ME,VA
Chloroform	CT,MA,NH,NY,RI,NC,ME,VA
Chloromethane	CT,MA,NH,NY,RI,NC,ME,VA
1,2-Dichlorobenzene	CT,MA,NH,NY,RI,NC,ME,VA
1,3-Dichlorobenzene	CT,MA,NH,NY,RI,NC,ME,VA

CERTIFICATIONS
Certified Analyses included in this Report

Analyte	Certifications
<i>EPA 624 in Water</i>	
1,4-Dichlorobenzene	CT,MA,NH,NY,RI,NC,ME,VA
1,2-Dichloroethane	CT,MA,NH,NY,RI,NC,ME,VA
1,1-Dichloroethane	CT,MA,NH,NY,RI,NC,ME,VA
1,1-Dichloroethylene	CT,MA,NH,NY,RI,NC,ME,VA
trans-1,2-Dichloroethylene	CT,MA,NH,NY,RI,NC,ME,VA
1,2-Dichloropropane	CT,MA,NH,NY,RI,NC,ME,VA
cis-1,3-Dichloropropene	CT,MA,NH,NY,RI,NC,ME,VA
trans-1,3-Dichloropropene	CT,MA,NH,NY,RI,NC,ME,VA
Ethylbenzene	CT,MA,NH,NY,RI,NC,ME,VA
Methyl tert-Butyl Ether (MTBE)	NH,NY,NC
Methylene Chloride	CT,MA,NH,NY,RI,NC,ME,VA
Naphthalene	NC
1,1,2,2-Tetrachloroethane	CT,MA,NH,NY,RI,NC,ME,VA
Tetrachloroethylene	CT,MA,NH,NY,RI,NC,ME,VA
Toluene	CT,MA,NH,NY,RI,NC,ME,VA
1,2,4-Trichlorobenzene	NC
1,1,1-Trichloroethane	CT,MA,NH,NY,RI,NC,ME,VA
1,1,2-Trichloroethane	CT,MA,NH,NY,RI,NC,ME,VA
Trichloroethylene	CT,MA,NH,NY,RI,NC,ME,VA
Trichlorofluoromethane (Freon 11)	CT,MA,NH,NY,RI,NC,ME,VA
Vinyl Chloride	CT,MA,NH,NY,RI,NC,ME,VA
m+p Xylene	CT,MA,NH,NY,RI,NC,VA
o-Xylene	CT,MA,NH,NY,RI,NC,VA
<i>EPA 625 in Water</i>	
Acenaphthene	CT,MA,NH,NY,NC,RI,ME,VA
Acenaphthylene	CT,MA,NH,NY,NC,RI,ME,VA
Acetophenone	NY,NC
Anthracene	CT,MA,NH,NY,NC,RI,ME,VA
Aniline	NC
Benzidine	CT,MA,NH,NY,NC,RI,ME,VA
Benzo(a)anthracene	CT,MA,NH,NY,NC,RI,ME,VA
Benzo(a)pyrene	CT,MA,NH,NY,NC,RI,ME,VA
Benzo(b)fluoranthene	CT,MA,NH,NY,NC,RI,ME,VA
Benzo(g,h,i)perylene	CT,MA,NH,NY,NC,RI,ME,VA
Benzo(k)fluoranthene	CT,MA,NH,NY,NC,RI,ME,VA
4-Bromophenylphenylether	CT,MA,NH,NY,NC,RI,ME,VA
Butylbenzylphthalate	CT,MA,NH,NY,NC,RI,ME,VA
4-Chloro-3-methylphenol	CT,MA,NH,NY,NC,RI,VA
Bis(2-chloroethoxy)methane	CT,MA,NH,NY,NC,RI,ME,VA
Bis(2-chloroethyl)ether	CT,MA,NH,NY,NC,RI,ME,VA
Bis(2-chloroisopropyl)ether	CT,MA,NH,NY,NC,RI,ME,VA
2-Chloronaphthalene	CT,MA,NH,NY,NC,RI,ME,VA
2-Chlorophenol	CT,MA,NH,NY,NC,RI,ME,VA
4-Chlorophenylphenylether	CT,MA,NH,NY,NC,RI,ME,VA
Chrysene	CT,MA,NH,NY,NC,RI,ME,VA
4-Chloroaniline	NC

CERTIFICATIONS
Certified Analyses included in this Report

Analyte	Certifications
<i>EPA 625 in Water</i>	
Dibenz(a,h)anthracene	CT,MA,NH,NY,NC,RI,ME,VA
Di-n-butylphthalate	CT,MA,NH,NY,NC,RI,ME,VA
1,3-Dichlorobenzene	MA,NC
1,4-Dichlorobenzene	MA,NC
1,2-Dichlorobenzene	MA,NC
3,3-Dichlorobenzidine	CT,MA,NH,NY,NC,RI,ME,VA
2,4-Dichlorophenol	CT,MA,NH,NY,NC,RI,ME,VA
Dibenzofuran	NC
Diethylphthalate	CT,MA,NH,NY,NC,RI,ME,VA
2,4-Dimethylphenol	CT,MA,NH,NY,NC,RI,ME,VA
Dimethylphthalate	CT,MA,NH,NY,NC,RI,ME,VA
4,6-Dinitro-2-methylphenol	CT,MA,NH,NY,NC,RI,ME,VA
2,4-Dinitrophenol	CT,MA,NH,NY,NC,RI,ME,VA
2,4-Dinitrotoluene	CT,MA,NH,NY,NC,RI,ME,VA
2,6-Dinitrotoluene	CT,MA,NH,NY,NC,RI,ME,VA
Di-n-octylphthalate	CT,MA,NH,NY,NC,RI,ME,VA
1,2-Diphenylhydrazine (as Azobenzene)	NC
Bis(2-Ethylhexyl)phthalate	CT,MA,NH,NY,NC,RI,ME,VA
Fluoranthene	CT,MA,NH,NY,NC,RI,ME,VA
Fluorene	CT,MA,NH,NY,NC,RI,ME,VA
Hexachlorobenzene	CT,MA,NH,NY,NC,RI,ME,VA
Hexachlorobutadiene	CT,MA,NH,NY,NC,RI,ME,VA
Hexachlorocyclopentadiene	CT,MA,NH,NY,NC,RI,ME,VA
Hexachloroethane	CT,MA,NH,NY,NC,RI,ME,VA
Indeno(1,2,3-cd)pyrene	CT,MA,NH,NY,NC,RI,ME,VA
Isophorone	CT,MA,NH,NY,NC,RI,ME,VA
Naphthalene	CT,MA,NH,NY,NC,RI,ME,VA
Nitrobenzene	CT,MA,NH,NY,NC,RI,ME,VA
2-Nitrophenol	CT,MA,NH,NY,NC,RI,ME,VA
4-Nitrophenol	CT,MA,NH,NY,NC,RI,ME,VA
N-Nitrosodimethylamine	CT,MA,NH,NY,NC,RI,ME,VA
N-Nitrosodiphenylamine	CT,MA,NH,NY,NC,RI,ME,VA
N-Nitrosodi-n-propylamine	CT,MA,NH,NY,NC,RI,ME,VA
Pentachlorophenol	CT,MA,NH,NY,NC,RI,ME,VA
2-Methylnaphthalene	NC
Phenanthrene	CT,MA,NH,NY,NC,RI,ME,VA
2-Methylphenol	NY,NC
Phenol	CT,MA,NH,NY,NC,RI,ME,VA
3/4-Methylphenol	NY,NC
Pyrene	CT,MA,NH,NY,NC,RI,ME,VA
1,2,4-Trichlorobenzene	CT,MA,NH,NY,NC,RI,ME,VA
2,4,6-Trichlorophenol	CT,MA,NH,NY,NC,RI,ME,VA
2,4,5-Trichlorophenol	CT,MA,NH,NY,NC
2-Fluorophenol	NC
<i>MADEP-EPH-04-1.1 in Water</i>	
C9-C18 Aliphatics	CT,NC,ME,NH-P

CERTIFICATIONS
Certified Analyses included in this Report

Analyte	Certifications
<i>MADEP-EPH-04-1.1 in Water</i>	
C19-C36 Aliphatics	CT,NC,ME,NH-P
Unadjusted C11-C22 Aromatics	CT,NC,ME,NH-P
C11-C22 Aromatics	CT,NC,ME,NH-P
Acenaphthene	CT,NC,ME,NH-P
Acenaphthylene	CT,NC,ME,NH-P
Anthracene	CT,NC,ME,NH-P
Benzo(a)anthracene	CT,NC,ME,NH-P
Benzo(a)pyrene	CT,NC,ME,NH-P
Benzo(b)fluoranthene	CT,NC,ME,NH-P
Benzo(g,h,i)perylene	CT,NC,ME,NH-P
Benzo(k)fluoranthene	CT,NC,ME,NH-P
Chrysene	CT,NC,ME,NH-P
Dibenz(a,h)anthracene	CT,NC,ME,NH-P
Fluoranthene	CT,NC,ME,NH-P
Fluorene	CT,NC,ME
Indeno(1,2,3-cd)pyrene	CT,NC,ME,NH-P
2-Methylnaphthalene	CT,NC
Naphthalene	CT,NC,ME,NH-P
Phenanthrene	CT,NC,ME,NH-P
Pyrene	CT,NC,ME,NH-P
<i>SM19-22 4500 NH3 C in Water</i>	
Ammonia as N	NY,MA,CT,RI,VA,NC,ME
<i>SM21-22 2540D in Water</i>	
Total Suspended Solids	CT,MA,NH,NY,RI,NC,ME,VA
<i>SM21-22 3500 Cr B in Water</i>	
Hexavalent Chromium	NY,CT,NH,RI,ME,VA,NC
<i>SM21-22 4500 CL G in Water</i>	
Chlorine, Residual	CT,MA,RI,ME
<i>SM21-22 4500 CN E in Water</i>	
Cyanide	CT,MA,NH,NY,RI,NC,ME,VA
<i>SW-846 1030 in Soil</i>	
Ignitability	NY,NH,CT,NC,ME,VA
<i>SW-846 6010C-D in Soil</i>	
Arsenic	CT,NH,NY,ME,VA,NC
Barium	CT,NH,NY,ME,VA,NC
Cadmium	CT,NH,NY,ME,VA,NC
Chromium	CT,NH,NY,ME,VA,NC
Lead	CT,NH,NY,AIHA,ME,VA,NC
Selenium	CT,NH,NY,ME,VA,NC
Silver	CT,NH,NY,ME,VA,NC
<i>SW-846 7471B in Soil</i>	
Mercury	CT,NH,NY,NC,ME,VA
<i>SW-846 8015C in Water</i>	
Ethanol	NY

CERTIFICATIONS
Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8082A in Soil</i>	
Aroclor-1016	CT,NH,NY,NC,ME,VA
Aroclor-1016 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1221	CT,NH,NY,NC,ME,VA
Aroclor-1221 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1232	CT,NH,NY,NC,ME,VA
Aroclor-1232 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1242	CT,NH,NY,NC,ME,VA
Aroclor-1242 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1248	CT,NH,NY,NC,ME,VA
Aroclor-1248 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1254	CT,NH,NY,NC,ME,VA
Aroclor-1254 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1260	CT,NH,NY,NC,ME,VA
Aroclor-1260 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1262	NH,NY,NC,ME,VA
Aroclor-1262 [2C]	NH,NY,NC,ME,VA
Aroclor-1268	NH,NY,NC,ME,VA
Aroclor-1268 [2C]	NH,NY,NC,ME,VA
<i>SW-846 8260C in Soil</i>	
Acetone	CT,NH,NY,ME
Benzene	CT,NH,NY,ME
Bromobenzene	NH,NY,ME
Bromochloromethane	NH,NY,ME
Bromodichloromethane	CT,NH,NY,ME
Bromoform	CT,NH,NY,ME
Bromomethane	CT,NH,NY,ME
2-Butanone (MEK)	CT,NH,NY,ME
n-Butylbenzene	CT,NH,NY,ME
sec-Butylbenzene	CT,NH,NY,ME
tert-Butylbenzene	CT,NH,NY,ME
Carbon Disulfide	CT,NH,NY,ME
Carbon Tetrachloride	CT,NH,NY,ME
Chlorobenzene	CT,NH,NY,ME
Chlorodibromomethane	CT,NH,NY,ME
Chloroethane	CT,NH,NY,ME
Chloroform	CT,NH,NY,ME
Chloromethane	CT,NH,NY,ME
2-Chlorotoluene	CT,NH,NY,ME
4-Chlorotoluene	CT,NH,NY,ME
Dibromomethane	NH,NY,ME
1,2-Dichlorobenzene	CT,NH,NY,ME
1,3-Dichlorobenzene	CT,NH,NY,ME
1,4-Dichlorobenzene	CT,NH,NY,ME
Dichlorodifluoromethane (Freon 12)	NY,ME
1,1-Dichloroethane	CT,NH,NY,ME
1,2-Dichloroethane	CT,NH,NY,ME

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8260C in Soil</i>	
1,1-Dichloroethylene	CT,NH,NY,ME
cis-1,2-Dichloroethylene	CT,NH,NY,ME
trans-1,2-Dichloroethylene	CT,NH,NY,ME
1,2-Dichloropropane	CT,NH,NY,ME
1,3-Dichloropropane	NH,NY,ME
2,2-Dichloropropane	NH,NY,ME
1,1-Dichloropropene	NH,NY,ME
cis-1,3-Dichloropropene	CT,NH,NY,ME
trans-1,3-Dichloropropene	CT,NH,NY,ME
1,4-Dioxane	NY
Ethylbenzene	CT,NH,NY,ME
Hexachlorobutadiene	NH,NY,ME
2-Hexanone (MBK)	CT,NH,NY,ME
Isopropylbenzene (Cumene)	CT,NH,NY,ME
p-Isopropyltoluene (p-Cymene)	NH,NY
Methyl tert-Butyl Ether (MTBE)	NH,NY
Methylene Chloride	CT,NH,NY,ME
4-Methyl-2-pentanone (MIBK)	CT,NH,NY
Naphthalene	NH,NY,ME
n-Propylbenzene	NH,NY
Styrene	CT,NH,NY,ME
1,1,1,2-Tetrachloroethane	CT,NH,NY,ME
1,1,2,2-Tetrachloroethane	CT,NH,NY,ME
Tetrachloroethylene	CT,NH,NY,ME
Toluene	CT,NH,NY,ME
1,2,3-Trichlorobenzene	NY
1,2,4-Trichlorobenzene	NH,NY,ME
1,1,1-Trichloroethane	CT,NH,NY,ME
1,1,2-Trichloroethane	CT,NH,NY,ME
Trichloroethylene	CT,NH,NY,ME
Trichlorofluoromethane (Freon 11)	CT,NH,NY,ME
1,2,3-Trichloropropane	NH,NY,ME
1,2,4-Trimethylbenzene	CT,NH,NY,ME
1,3,5-Trimethylbenzene	CT,NH,NY,ME
Vinyl Chloride	CT,NH,NY,ME
m+p Xylene	CT,NH,NY,ME
o-Xylene	CT,NH,NY,ME
<i>SW-846 8270D in Soil</i>	
Acenaphthene	CT,NY,NH
Acenaphthylene	CT,NY,NH
Acetophenone	NY,NH
Aniline	NY,NH
Anthracene	CT,NY,NH
Benzo(a)anthracene	CT,NY,NH
Benzo(a)pyrene	CT,NY,NH
Benzo(b)fluoranthene	CT,NY,NH

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8270D in Soil</i>	
Benzo(g,h,i)perylene	CT,NY,NH
Benzo(k)fluoranthene	CT,NY,NH
Bis(2-chloroethoxy)methane	CT,NY,NH
Bis(2-chloroethyl)ether	CT,NY,NH
Bis(2-chloroisopropyl)ether	CT,NY,NH
Bis(2-Ethylhexyl)phthalate	CT,NY,NH
4-Bromophenylphenylether	CT,NY,NH
Butylbenzylphthalate	CT,NY,NH
4-Chloroaniline	CT,NY,NH
2-Chloronaphthalene	CT,NY,NH
2-Chlorophenol	CT,NY,NH
Chrysene	CT,NY,NH
Dibenz(a,h)anthracene	CT,NY,NH
Dibenzofuran	CT,NY,NH
Di-n-butylphthalate	CT,NY,NH
1,2-Dichlorobenzene	NY,NH
1,3-Dichlorobenzene	NY,NH
1,4-Dichlorobenzene	NY,NH
3,3-Dichlorobenzidine	CT,NY,NH
2,4-Dichlorophenol	CT,NY,NH
Diethylphthalate	CT,NY,NH
2,4-Dimethylphenol	CT,NY,NH
Dimethylphthalate	CT,NY,NH
2,4-Dinitrophenol	CT,NY,NH
2,4-Dinitrotoluene	CT,NY,NH
2,6-Dinitrotoluene	CT,NY,NH
Di-n-octylphthalate	CT,NY,NH
1,2-Diphenylhydrazine (as Azobenzene)	NY,NH
Fluoranthene	CT,NY,NH
Fluorene	NY,NH
Hexachlorobenzene	CT,NY,NH
Hexachlorobutadiene	CT,NY,NH
Hexachloroethane	CT,NY,NH
Indeno(1,2,3-cd)pyrene	CT,NY,NH
Isophorone	CT,NY,NH
2-Methylnaphthalene	CT,NY,NH
2-Methylphenol	CT,NY,NH
3/4-Methylphenol	CT,NY,NH
Naphthalene	CT,NY,NH
Nitrobenzene	CT,NY,NH
2-Nitrophenol	CT,NY,NH
4-Nitrophenol	CT,NY,NH
Pentachlorophenol	CT,NY,NH
Phenanthrene	CT,NY,NH
Phenol	CT,NY,NH
Pyrene	CT,NY,NH
1,2,4-Trichlorobenzene	CT,NY,NH

CERTIFICATIONS
Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8270D in Soil</i>	
2,4,5-Trichlorophenol	CT,NY,NH
2,4,6-Trichlorophenol	CT,NY,NH
<i>SW-846 8270D in Water</i>	
Acenaphthene	CT,NY,NC,ME,NH,VA,NJ
Acenaphthylene	CT,NY,NC,ME,NH,VA,NJ
Acetophenone	NY,NC
Aniline	CT,NY,NC,ME,VA,NJ
Anthracene	CT,NY,NC,ME,NH,VA,NJ
Benzidine	CT,NY,NC,ME,NH,VA,NJ
Benzo(a)anthracene	CT,NY,NC,ME,NH,VA,NJ
Benzo(a)pyrene	CT,NY,NC,ME,NH,VA,NJ
Benzo(b)fluoranthene	CT,NY,NC,ME,NH,VA,NJ
Benzo(g,h,i)perylene	CT,NY,NC,ME,NH,VA,NJ
Benzo(k)fluoranthene	CT,NY,NC,ME,NH,VA,NJ
Bis(2-chloroethoxy)methane	CT,NY,NC,ME,NH,VA,NJ
Bis(2-chloroethyl)ether	CT,NY,NC,ME,NH,VA,NJ
Bis(2-chloroisopropyl)ether	CT,NY,NC,ME,NH,VA,NJ
Bis(2-Ethylhexyl)phthalate	CT,NY,NC,ME,NH,VA,NJ
4-Bromophenylphenylether	CT,NY,NC,ME,NH,VA,NJ
Butylbenzylphthalate	CT,NY,NC,ME,NH,VA,NJ
4-Chloroaniline	CT,NY,NC,ME,NH,VA,NJ
4-Chloro-3-methylphenol	CT,NY,NC,ME,NH,VA,NJ
2-Chloronaphthalene	CT,NY,NC,ME,NH,VA,NJ
2-Chlorophenol	CT,NY,NC,ME,NH,VA,NJ
4-Chlorophenylphenylether	CT,NY,NC,ME,NH,VA,NJ
Chrysene	CT,NY,NC,ME,NH,VA,NJ
Dibenz(a,h)anthracene	CT,NY,NC,ME,NH,VA,NJ
Dibenzofuran	CT,NY,NC,ME,NH,VA,NJ
Di-n-butylphthalate	CT,NY,NC,ME,NH,VA,NJ
1,2-Dichlorobenzene	CT,NY,NC,ME,NH,VA,NJ
1,3-Dichlorobenzene	CT,NY,NC,ME,NH,VA,NJ
1,4-Dichlorobenzene	CT,NY,NC,ME,NH,VA,NJ
3,3-Dichlorobenzidine	CT,NY,NC,ME,NH,VA,NJ
2,4-Dichlorophenol	CT,NY,NC,ME,NH,VA,NJ
Diethylphthalate	CT,NY,NC,ME,NH,VA,NJ
2,4-Dimethylphenol	CT,NY,NC,ME,NH,VA,NJ
Dimethylphthalate	CT,NY,NC,ME,NH,VA,NJ
4,6-Dinitro-2-methylphenol	CT,NY,NC,ME,NH,VA,NJ
2,4-Dinitrophenol	CT,NY,NC,ME,NH,VA,NJ
2,4-Dinitrotoluene	CT,NY,NC,ME,NH,VA,NJ
2,6-Dinitrotoluene	CT,NY,NC,ME,NH,VA,NJ
Di-n-octylphthalate	CT,NY,NC,ME,NH,VA,NJ
1,2-Diphenylhydrazine (as Azobenzene)	NY,NC,ME
Fluoranthene	CT,NY,NC,ME,NH,VA,NJ
Fluorene	NY,NC,ME,NH,VA,NJ
Hexachlorobenzene	CT,NY,NC,ME,NH,VA,NJ

CERTIFICATIONS
Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8270D in Water</i>	
Hexachlorobutadiene	CT,NY,NC,ME,NH,VA,NJ
Hexachlorocyclopentadiene	CT,NY,NC,ME,NH,VA,NJ
Hexachloroethane	CT,NY,NC,ME,NH,VA,NJ
Indeno(1,2,3-cd)pyrene	CT,NY,NC,ME,NH,VA,NJ
Isophorone	CT,NY,NC,ME,NH,VA,NJ
2-Methylnaphthalene	CT,NY,NC,ME,NH,VA,NJ
2-Methylphenol	CT,NY,NC,NH,VA,NJ
3/4-Methylphenol	CT,NY,NC,NH,VA,NJ
Naphthalene	CT,NY,NC,ME,NH,VA,NJ
Nitrobenzene	CT,NY,NC,ME,NH,VA,NJ
2-Nitrophenol	CT,NY,NC,ME,NH,VA,NJ
4-Nitrophenol	CT,NY,NC,ME,NH,VA,NJ
N-Nitrosodimethylamine	CT,NY,NC,ME,NH,VA,NJ
N-Nitrosodiphenylamine	CT,NY,NC,ME,NH,VA,NJ
N-Nitrosodi-n-propylamine	CT,NY,NC,ME,NH,VA,NJ
Pentachlorophenol	CT,NY,NC,ME,NH,VA,NJ
Phenanthrene	CT,NY,NC,ME,NH,VA,NJ
Phenol	CT,NY,NC,ME,NH,VA,NJ
Pyrene	CT,NY,NC,ME,NH,VA,NJ
1,2,4-Trichlorobenzene	CT,NY,NC,ME,NH,VA,NJ
2,4,5-Trichlorophenol	CT,NY,NC,ME,NH,VA,NJ
2,4,6-Trichlorophenol	CT,NY,NC,ME,NH,VA,NJ
2-Fluorophenol	NC,VA
Phenol-d6	VA
Nitrobenzene-d5	VA

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2005	100033	03/1/2018
MA	Massachusetts DEP	M-MA100	06/30/2018
CT	Connecticut Department of Public Health	PH-0567	09/30/2019
NY	New York State Department of Health	10899 NELAP	04/1/2018
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2019
RI	Rhode Island Department of Health	LAO00112	12/30/2018
NC	North Carolina Div. of Water Quality	652	12/31/2018
NJ	New Jersey DEP	MA007 NELAP	06/30/2018
FL	Florida Department of Health	E871027 NELAP	06/30/2018
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2018
ME	State of Maine	2011028	06/9/2019
VA	Commonwealth of Virginia	460217	12/14/2018
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2018
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2018
NC-DW	North Carolina Department of Health	25703	07/31/2018



Phone: 413-525-2332

Fax: 413-525-6405

Email: info@contestlabs.com

Lightship Engineering

Address: 29 Industrial Park Rd

Phone: 508-830-3344

Project Name: 500.98.12

Project Location: South Boston

Project Number: 500.98.12

Project Manager: Kevin Paradise

Con-Test Quote Name/Number:

Invoice Recipient: Eversource Att: Matt Waldrip

Sampled By: XUAN HU

Requested Turnaround Time	
7-Day ☐	10-Day ☐
Due Date: _____	
Rush-Approval Required	
1-Day ☐	3-Day ☐
2-Day ☒	4-Day ☐
Data Delivery	
Format: PDF ☒	EXCEL ☐
Other: _____	
CLP Like Data Pkg Required: ☐	
Email To: KParadise@lightship.com	
Fax To #: _____	

Con-Test Work Order #	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	Composite	Grab	Matrix Code	Conc Code
	LE-WC27	2/13/18	NA	X	X	S	
01	LE-WC27		1240	X	X	S	
02	LE-WC28		1340	X	X	S	
	LE-TMW4		NA			GW	
03	LE-TMW4		1230			GW	
04	LE-TMW5		1545			GW	

Comments:

Bill to Eversource Att: Matt Waldrip
LE-TMW4 & LE-TMW5 don't have 23 containers each ID.

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

Relinquished by: (signature) <i>[Signature]</i>	Date/Time: 2/13/18 10:15	Special Requirements ☐ MA MCP Required ☐ MCP Certification Form Required ☐ CT RCP Required ☐ RCP Certification Form Required ☐ MA State DW Required
	Date/Time: 1/4/15	
	Date/Time: 1/13/18	
	Date/Time: 1/18/18	
Received by: (signature) <i>[Signature]</i>	Date/Time: 2/13/18	Project Entity ☐ Government ☐ Federal ☐ City ☐ Municipality ☐ 21 J ☐ Brownfield ☐ MWRA ☐ School ☐ MBTA ☐ WRTA ☐ Chromatogram ☐ AIHA-LAP, LLC
Relinquished by: (signature) <i>[Signature]</i>	Date/Time: 2/13/18	
Received by: (signature) <i>[Signature]</i>	Date/Time: 2/13/18	
Relinquished by: (signature) <i>[Signature]</i>	Date/Time: 2/13/18	
Received by: (signature) <i>[Signature]</i>	Date/Time: 2/13/18	Project Entity ☐ Government ☐ Federal ☐ City ☐ Municipality ☐ 21 J ☐ Brownfield ☐ MWRA ☐ School ☐ MBTA ☐ WRTA ☐ Chromatogram ☐ AIHA-LAP, LLC
Relinquished by: (signature) <i>[Signature]</i>	Date/Time: 2/13/18	
Received by: (signature) <i>[Signature]</i>	Date/Time: 2/13/18	
Relinquished by: (signature) <i>[Signature]</i>	Date/Time: 2/13/18	




con-test®
 ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

Login Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False Statement will be brought to the attention of the Client - State True or False
Client Light Smith EngineeringReceived By ESD Date 2-13-18 Time 18:40
 How were the samples received? In Cooler T No Cooler On Ice T No Ice
 Direct from Sampling Ambient Melted Ice

 Were samples within Temperature? 2-6°C T By Gun # 577 Actual Temp - 2.8/3.2
 By Blank # Actual Temp -

 Was Custody Seal Intact? NA Were Samples Tampered with? NA
 Was COC Relinquished? T Does Chain Agree With Samples? T
Are there broken/leaking/loose caps on any samples? F
 Is COC in ink/ Legible? T Were samples received within holding time? T
 Did COC include all Client T Analysis T Sampler Name T
 pertinent Information? Project T ID's T Collection Dates/Times T

 Are Sample labels filled out and legible? T
 Are there Lab to Filters? F Who was notified?
 Are there Rushes? T Who was notified? Brie
 Are there Short Holds? T Who was notified? Whe

 Is there enough Volume? F
 Is there Headspace where applicable? F MS/MSD? F
 Proper Media/Containers Used? T Is splitting samples required? F
 Were trip blanks received? F On COC? F
 Do all samples have the proper pH? pH Acid pH 2 Base pH 12

Vials	#	Containers:	#		#		#
Unp-		1 Liter Amb.	9	1 Liter Plastic	1	16 oz Amb.	2
HCL-	12	500 mL Amb.		500 mL Plastic	4	8oz Amb/Clear	
Meoh-	2	250 mL Amb.		250 mL Plastic	5	4oz Amb/Clear	
Bisulfate-	4	Col./Bacteria		Flashpoint		2oz Amb/Clear	
DI-	8	Other Plastic		Other Glass		Encore	
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:	
Sulfuric-		Perchlorate		Ziplock			

Unused Media

Vials	#	Containers:	#		#		#
Unp-		1 Liter Amb.		1 Liter Plastic		16 oz Amb.	
HCL-		500 mL Amb.		500 mL Plastic		8oz Amb/Clear	
Meoh-		250 mL Amb.		250 mL Plastic		4oz Amb/Clear	
Bisulfate-		Col./Bacteria		Flashpoint		2oz Amb/Clear	
DI-		Other Plastic		Other Glass		Encore	
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:	
Sulfuric-		Perchlorate		Ziplock			

Comments:

MADEP MCP Analytical Method Report Certification Form

Laboratory Name: Con-Test Analytical Laboratory				Project #: 18B0481	
Project Location: South Boston, MA				RTN:	
This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)] 18B0481-01 thru 18B0481-04					
Matrices: Soil		Water			
CAM Protocol (check all that below)					
8260 VOC CAM II A (X)	7470/7471 Hg CAM IIIB (X)	MassDEP VPH CAM IV A ()	8081 Pesticides CAM V B ()	7196 Hex Cr CAM VI B ()	MassDEP APH CAM IX A ()
8270 SVOC CAM II B (X)	7010 Metals CAM III C ()	MassDEP EPH CAM IV A (X)	8151 Herbicides CAM V C ()	8330 Explosives CAM VIII A ()	TO-15 VOC CAM IX B ()
6010 Metals CAM III A (X)	6020 Metals CAM III D ()	8082 PCB CAM V A (X)	9014 Total Cyanide/PAC CAM VI A ()	6860 Perchlorate CAM VIII B ()	
Affirmative response to Questions A through F is required for "Presumptive Certainty" status					
A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?				☒ Yes ☐ No ¹
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?				☒ Yes ☐ No ¹
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?				☒ Yes ☐ No ¹
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data?				☒ Yes ☐ No ¹
E a	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).				☐ Yes ☐ No ¹
E b	APH and TO-15 Methods only: Was the complete analyte list reported for each method?				☐ Yes ☐ No ¹
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all No responses to Questions A through E)?				☒ Yes ☐ No ¹
A response to questions G, H and I below is required for "Presumptive Certainty" status					
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?				☒ Yes ☐ No ¹
Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.					
H	Were all QC performance standards specified in the CAM protocol(s) achieved?				☐ Yes ☒ No ¹
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?				☐ Yes ☒ No ¹
¹ All Negative responses must be addressed in an attached Environmental Laboratory case narrative.					
I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.					
Signature: _____ 		Position: Project Manager			
Printed Name: Lisa A. Worthington		Date: 02/19/18			