

**APPENDIX D:  
LABORATORY ANALYTICAL REPORTS**

April 5, 2019

Kristen Sarson  
Vertex Engineering - Boston  
100 North Washington St. Suite 302  
Boston, MA 02114

Project Location: Wayland, MA  
Client Job Number:  
Project Number: 46047  
Laboratory Work Order Number: 19C1572

Enclosed are results of analyses for samples received by the laboratory on March 29, 2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, reading "Jessica Hoffman", is displayed on a light blue rectangular background. The signature is written in a cursive, flowing style.

Jessica L. Hoffman  
Project Manager

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Vertex Engineering - Boston  
 100 North Washington St. Suite 302  
 Boston, MA 02114  
 ATTN: Kristen Sarson

REPORT DATE: 4/5/2019

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 46047

**ANALYTICAL SUMMARY**

WORK ORDER NUMBER: 19C1572

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

PROJECT LOCATION: Wayland, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
V-107 (5-10)	19C1572-01	Soil		SM 2540G SM21-22 2510B Modified SW-846 1030 SW-846 6010D 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	
V-108 (0-5)	19C1572-02	Soil		SM 2540G SM21-22 2510B Modified SW-846 1030 SW-846 6010D 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	
V-109 (5-10)	19C1572-03	Soil		SM 2540G SM21-22 2510B Modified SW-846 1030 SW-846 6010D 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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**ANALYTICAL SUMMARY**

WORK ORDER NUMBER: 19C1572

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

PROJECT LOCATION: Wayland, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
V-110 (5-10)	19C1572-04	Soil		SM 2540G SM21-22 2510B Modified SW-846 1030 SW-846 6010D 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	
V-111 (0-10)	19C1572-05	Soil		SM 2540G SM21-22 2510B Modified SW-846 1030 SW-846 6010D 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	
V-112 (0-5)	19C1572-06	Soil		SM 2540G SM21-22 2510B Modified SW-846 1030 SW-846 6010D 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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**ANALYTICAL SUMMARY**

WORK ORDER NUMBER: 19C1572

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

PROJECT LOCATION: Wayland, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
V-113 (0-5)	19C1572-07	Soil		SM 2540G SM21-22 2510B Modified SW-846 1030 SW-846 6010D 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	
V-114 (5-10)	19C1572-08	Soil		SM 2540G SM21-22 2510B Modified SW-846 1030 SW-846 6010D 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	
V-115 (5-10)	19C1572-09	Soil		SM 2540G SW-846 8082A	
V-116 (0-5)	19C1572-10	Soil		SM 2540G SW-846 8082A	

**CASE NARRATIVE SUMMARY**

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



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SW-846 6010D

**Qualifications:****MS-07**

Matrix spike recovery is outside of control limits. Analysis is in control based on laboratory fortified blank recovery. Possibility of sample matrix effects that lead to low bias for reported result or non-homogeneous sample aliquot cannot be eliminated.

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

19C1572-06[V-112 (0-5)], B227367-MS1

SW-846 8082A

**Qualifications:****O-32**

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

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

19C1572-01[V-107 (5-10)], 19C1572-02[V-108 (0-5)], 19C1572-03[V-109 (5-10)], 19C1572-04[V-110 (5-10)], 19C1572-05[V-111 (0-10)], 19C1572-06[V-112 (0-5)], 19C1572-07[V-113 (0-5)], 19C1572-08[V-114 (5-10)], 19C1572-09[V-115 (5-10)], 19C1572-10[V-116 (0-5)]

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:****Vinyl Chloride**

19C1572-01[V-107 (5-10)], 19C1572-02[V-108 (0-5)], 19C1572-03[V-109 (5-10)], 19C1572-04[V-110 (5-10)], 19C1572-05[V-111 (0-10)], 19C1572-06[V-112 (0-5)], 19C1572-07[V-113 (0-5)], 19C1572-08[V-114 (5-10)], B227113-BLK1, B227113-BS1, B227113-BSD1, B227135-BLK1, B227135-BS1, B227135-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**

19C1572-01[V-107 (5-10)], 19C1572-02[V-108 (0-5)], 19C1572-03[V-109 (5-10)], 19C1572-04[V-110 (5-10)], 19C1572-05[V-111 (0-10)], 19C1572-06[V-112 (0-5)], 19C1572-07[V-113 (0-5)], 19C1572-08[V-114 (5-10)], B227113-BLK1, B227113-BS1, B227113-BSD1, B227135-BLK1, B227135-BS1, B227135-BSD1

**V-20**

Continuing calibration verification (CCV) 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:****Bromoform**

B227113-BS1, B227113-BSD1, B227135-BS1, B227135-BSD1, S034201-CCV1, S034203-CCV1

**Methyl tert-Butyl Ether (MTBE)**

B227113-BS1, B227113-BSD1, B227135-BS1, B227135-BSD1, S034201-CCV1, S034203-CCV1

**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**

19C1572-01[V-107 (5-10)], 19C1572-02[V-108 (0-5)], 19C1572-03[V-109 (5-10)], 19C1572-04[V-110 (5-10)], 19C1572-05[V-111 (0-10)], 19C1572-06[V-112 (0-5)], 19C1572-07[V-113 (0-5)], 19C1572-08[V-114 (5-10)], B227113-BLK1, B227113-BS1, B227113-BSD1, B227135-BLK1, B227135-BS1, B227135-BSD1, S034201-CCV1, S034203-CCV1

SW-846 8270D

**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:****Aniline**

B227222-BS1

**V-05**  
Continuing calibration verification (CCV) did not meet method specifications and was biased on the low side for this compound.

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

**2-Methylphenol**

19C1572-01[V-107 (5-10)], 19C1572-02[V-108 (0-5)], 19C1572-03[V-109 (5-10)], 19C1572-04[V-110 (5-10)], 19C1572-05[V-111 (0-10)], 19C1572-06[V-112 (0-5)], 19C1572-07[V-113 (0-5)], 19C1572-08[V-114 (5-10)], B227222-BLK1, B227222-BS1, B227222-BSD1, B227222-MS1, B227222-MSD1, S034267-CCV1

**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**

19C1572-01[V-107 (5-10)], 19C1572-02[V-108 (0-5)], 19C1572-03[V-109 (5-10)], 19C1572-04[V-110 (5-10)], 19C1572-05[V-111 (0-10)], 19C1572-06[V-112 (0-5)], 19C1572-07[V-113 (0-5)], 19C1572-08[V-114 (5-10)], B227222-BLK1, B227222-BS1, B227222-BSD1, B227222-MS1, B227222-MSD1, S034267-CCV1

**4-Chloroaniline**

19C1572-01[V-107 (5-10)], 19C1572-02[V-108 (0-5)], 19C1572-03[V-109 (5-10)], 19C1572-04[V-110 (5-10)], 19C1572-05[V-111 (0-10)], 19C1572-06[V-112 (0-5)], 19C1572-07[V-113 (0-5)], 19C1572-08[V-114 (5-10)], B227222-BLK1, B227222-BS1, B227222-BSD1, B227222-MS1, B227222-MSD1, S034267-CCV1

**Aniline**

19C1572-01[V-107 (5-10)], 19C1572-02[V-108 (0-5)], 19C1572-03[V-109 (5-10)], 19C1572-04[V-110 (5-10)], 19C1572-05[V-111 (0-10)], 19C1572-06[V-112 (0-5)], 19C1572-07[V-113 (0-5)], 19C1572-08[V-114 (5-10)], B227222-BLK1, B227222-BS1, B227222-BSD1, B227222-MS1, B227222-MSD1, S034267-CCV1

**SW-846 9045C**

**Qualifications:**

**H-03**  
Sample received after recommended holding time was exceeded.

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

**pH**  
19C1572-01[V-107 (5-10)], 19C1572-02[V-108 (0-5)], 19C1572-03[V-109 (5-10)], 19C1572-04[V-110 (5-10)], 19C1572-05[V-111 (0-10)], 19C1572-06[V-112 (0-5)], 19C1572-07[V-113 (0-5)], 19C1572-08[V-114 (5-10)], B227052-DUP1

**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: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-107 (5-10)

Sampled: 3/27/2019 13:05

Sample ID: 19C1572-01

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.076	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00076	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
Benzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
Bromobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
Bromochloromethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
Bromodichloromethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
Bromoform	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
Bromomethane	ND	0.0076	mg/Kg dry	1	V-34	SW-846 8260C	4/1/19	4/1/19 15:19	MFF
2-Butanone (MEK)	ND	0.030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
n-Butylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
sec-Butylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
tert-Butylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00076	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
Carbon Disulfide	ND	0.0046	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
Carbon Tetrachloride	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
Chlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
Chlorodibromomethane	ND	0.00076	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
Chloroethane	ND	0.0076	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
Chloroform	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
Chloromethane	ND	0.0076	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
2-Chlorotoluene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
4-Chlorotoluene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
1,2-Dibromoethane (EDB)	ND	0.00076	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
Dibromomethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
1,2-Dichlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
1,3-Dichlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
1,4-Dichlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0076	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
1,1-Dichloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
1,2-Dichloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
1,1-Dichloroethylene	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
cis-1,2-Dichloroethylene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
trans-1,2-Dichloroethylene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
1,2-Dichloropropane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
1,3-Dichloropropane	ND	0.00076	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
2,2-Dichloropropane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
1,1-Dichloropropene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
cis-1,3-Dichloropropene	ND	0.00076	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
trans-1,3-Dichloropropene	ND	0.00076	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
Diethyl Ether	ND	0.0076	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
Diisopropyl Ether (DIPE)	ND	0.00076	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
1,4-Dioxane	ND	0.076	mg/Kg dry	1	V-16	SW-846 8260C	4/1/19	4/1/19 15:19	MFF
Ethylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-107 (5-10)

Sampled: 3/27/2019 13:05

Sample ID: 19C1572-01

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
2-Hexanone (MBK)	ND	0.015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
Isopropylbenzene (Cumene)	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
Methylene Chloride	ND	0.0076	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
Naphthalene	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
n-Propylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
Styrene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
1,1,1,2-Tetrachloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
1,1,1,2,2-Tetrachloroethane	ND	0.00076	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
Tetrachloroethylene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
Tetrahydrofuran	ND	0.0076	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
Toluene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
1,2,3-Trichlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
1,2,4-Trichlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
1,1,1-Trichloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
1,1,2-Trichloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
Trichloroethylene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0076	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
1,2,3-Trichloropropane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
1,2,4-Trimethylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
1,3,5-Trimethylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
Vinyl Chloride	ND	0.0076	mg/Kg dry	1	L-04	SW-846 8260C	4/1/19	4/1/19 15:19	MFF
m+p Xylene	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
o-Xylene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	97.7	70-130	4/1/19 15:19
Toluene-d8	97.4	70-130	4/1/19 15:19
4-Bromofluorobenzene	97.7	70-130	4/1/19 15:19

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-107 (5-10)

Sampled: 3/27/2019 13:05

Sample ID: 19C1572-01

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.17	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
Acenaphthylene	ND	0.17	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
Acetophenone	ND	0.34	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
Aniline	ND	0.34	mg/Kg dry	1	V-34	SW-846 8270D	4/2/19	4/3/19 15:47	IMR
Anthracene	ND	0.17	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
Benzo(a)anthracene	ND	0.17	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
Benzo(a)pyrene	ND	0.17	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
Benzo(b)fluoranthene	ND	0.17	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
Benzo(g,h,i)perylene	ND	0.17	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
Benzo(k)fluoranthene	ND	0.17	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
Bis(2-chloroethoxy)methane	ND	0.34	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
Bis(2-chloroethyl)ether	ND	0.34	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
Bis(2-chloroisopropyl)ether	ND	0.34	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.34	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
4-Bromophenylphenylether	ND	0.34	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
Butylbenzylphthalate	ND	0.34	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
4-Chloroaniline	ND	0.66	mg/Kg dry	1	V-34	SW-846 8270D	4/2/19	4/3/19 15:47	IMR
2-Chloronaphthalene	ND	0.34	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
2-Chlorophenol	ND	0.34	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
Chrysene	ND	0.17	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
Dibenz(a,h)anthracene	ND	0.17	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
Dibenzofuran	ND	0.34	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
Di-n-butylphthalate	ND	0.34	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
1,2-Dichlorobenzene	ND	0.34	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
1,3-Dichlorobenzene	ND	0.34	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
1,4-Dichlorobenzene	ND	0.34	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
3,3-Dichlorobenzidine	ND	0.17	mg/Kg dry	1	V-34	SW-846 8270D	4/2/19	4/3/19 15:47	IMR
2,4-Dichlorophenol	ND	0.34	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
Diethylphthalate	ND	0.34	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
2,4-Dimethylphenol	ND	0.34	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
Dimethylphthalate	ND	0.34	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
2,4-Dinitrophenol	ND	0.66	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
2,4-Dinitrotoluene	ND	0.34	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
2,6-Dinitrotoluene	ND	0.34	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
Di-n-octylphthalate	ND	0.34	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.34	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
Fluoranthene	ND	0.17	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
Fluorene	ND	0.17	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
Hexachlorobenzene	ND	0.34	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
Hexachlorobutadiene	ND	0.34	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
Hexachloroethane	ND	0.34	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
Indeno(1,2,3-cd)pyrene	ND	0.17	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
Isophorone	ND	0.34	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
2-Methylnaphthalene	ND	0.17	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-107 (5-10)

Sampled: 3/27/2019 13:05

Sample ID: 19C1572-01

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	0.34	mg/Kg dry	1	V-05	SW-846 8270D	4/2/19	4/3/19 15:47	IMR
3/4-Methylphenol	ND	0.34	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
Naphthalene	ND	0.17	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
Nitrobenzene	ND	0.34	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
2-Nitrophenol	ND	0.34	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
4-Nitrophenol	ND	0.66	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
Pentachlorophenol	ND	0.34	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
Phenanthrene	ND	0.17	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
Phenol	ND	0.34	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
Pyrene	ND	0.17	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
1,2,4-Trichlorobenzene	ND	0.34	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
2,4,5-Trichlorophenol	ND	0.34	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
2,4,6-Trichlorophenol	ND	0.34	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	70.5	30-130	
Phenol-d6	82.6	30-130	
Nitrobenzene-d5	81.6	30-130	
2-Fluorobiphenyl	90.5	30-130	
2,4,6-Tribromophenol	94.2	30-130	
p-Terphenyl-d14	115	30-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-107 (5-10)

Sampled: 3/27/2019 13:05

Sample ID: 19C1572-01

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 16:55	JMB
Aroclor-1221 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 16:55	JMB
Aroclor-1232 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 16:55	JMB
Aroclor-1242 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 16:55	JMB
Aroclor-1248 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 16:55	JMB
Aroclor-1254 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 16:55	JMB
Aroclor-1260 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 16:55	JMB
Aroclor-1262 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 16:55	JMB
Aroclor-1268 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 16:55	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		97.9	30-150					4/4/19 16:55	
Decachlorobiphenyl [2]		93.9	30-150					4/4/19 16:55	
Tetrachloro-m-xylene [1]		97.4	30-150					4/4/19 16:55	
Tetrachloro-m-xylene [2]		95.2	30-150					4/4/19 16:55	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Sampled: 3/27/2019 13:05

Field Sample #: V-107 (5-10)

Sample ID: 19C1572-01

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	ND	8.4	mg/Kg dry	1		SW-846 8100 Modified	4/2/19	4/4/19 4:52	RMW
<b>Surrogates</b>		<b>% Recovery</b>	<b>Recovery Limits</b>		<b>Flag/Qual</b>				
2-Fluorobiphenyl		69.1	40-140					4/4/19 4:52	



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-107 (5-10)

Sampled: 3/27/2019 13:05

Sample ID: 19C1572-01

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.7	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 16:34	MJH
Arsenic	11	1.7	mg/Kg dry	1		SW-846 6010D	4/3/19	4/5/19 13:00	EJB
Barium	27	1.7	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 16:34	MJH
Beryllium	0.27	0.17	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 16:34	MJH
Cadmium	0.34	0.17	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 16:34	MJH
Chromium	12	0.34	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 16:34	MJH
Lead	6.1	0.51	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 16:34	MJH
Mercury	ND	0.025	mg/Kg dry	1		SW-846 7471B	4/2/19	4/3/19 12:58	TBC
Nickel	9.3	0.34	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 16:34	MJH
Selenium	ND	3.4	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 16:34	MJH
Silver	0.42	0.34	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 16:34	MJH
Thallium	ND	1.7	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 22:31	EJB
Vanadium	17	0.68	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 16:34	MJH
Zinc	26	0.68	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 16:34	MJH

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-107 (5-10)

Sampled: 3/27/2019 13:05

Sample ID: 19C1572-01

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	97.0		% Wt	1		SM 2540G	4/3/19	4/4/19 0:58	AVF
Ignitability	Absent		present/absent	1		SW-846 1030	4/2/19	4/2/19 19:15	DJM
pH @22.2°C	8.1		pH Units	1	H-03	SW-846 9045C	3/30/19	3/30/19 15:04	AIA
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	3/30/19	3/31/19 10:20	KMV
Reactive Sulfide	ND	19	mg/L	1		SW-846 9030A	3/30/19	3/31/19 9:50	KMV
Specific conductance	4.9	2.0	µmhos/cm	1		SM21-22 2510B Modified	3/31/19	3/31/19 11:45	KMV

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-108 (0-5)

Sampled: 3/27/2019 13:15

Sample ID: 19C1572-02

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.088	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00088	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
Benzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
Bromobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
Bromochloromethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
Bromodichloromethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
Bromoform	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
Bromomethane	ND	0.0088	mg/Kg dry	1	V-34	SW-846 8260C	4/1/19	4/1/19 15:43	MFF
2-Butanone (MEK)	ND	0.035	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
n-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
sec-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
tert-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00088	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
Carbon Disulfide	ND	0.0053	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
Carbon Tetrachloride	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
Chlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
Chlorodibromomethane	ND	0.00088	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
Chloroethane	ND	0.0088	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
Chloroform	ND	0.0035	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
Chloromethane	ND	0.0088	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
2-Chlorotoluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
4-Chlorotoluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
1,2-Dibromoethane (EDB)	ND	0.00088	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
Dibromomethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
1,2-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
1,3-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
1,4-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0088	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
1,1-Dichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
1,2-Dichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
1,1-Dichloroethylene	ND	0.0035	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
cis-1,2-Dichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
trans-1,2-Dichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
1,2-Dichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
1,3-Dichloropropane	ND	0.00088	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
2,2-Dichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
1,1-Dichloropropene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
cis-1,3-Dichloropropene	ND	0.00088	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
trans-1,3-Dichloropropene	ND	0.00088	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
Diethyl Ether	ND	0.0088	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
Diisopropyl Ether (DIPE)	ND	0.00088	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
1,4-Dioxane	ND	0.088	mg/Kg dry	1	V-16	SW-846 8260C	4/1/19	4/1/19 15:43	MFF
Ethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-108 (0-5)

Sampled: 3/27/2019 13:15

Sample ID: 19C1572-02

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
2-Hexanone (MBK)	ND	0.018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
Isopropylbenzene (Cumene)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0035	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
Methylene Chloride	ND	0.0088	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
Naphthalene	ND	0.0035	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
n-Propylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
Styrene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
1,1,1,2-Tetrachloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
1,1,1,2,2-Tetrachloroethane	ND	0.00088	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
Tetrachloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
Tetrahydrofuran	ND	0.0088	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
Toluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
1,2,3-Trichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
1,2,4-Trichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
1,1,1-Trichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
1,1,2-Trichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
Trichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0088	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
1,2,3-Trichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
1,2,4-Trimethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
1,3,5-Trimethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
Vinyl Chloride	ND	0.0088	mg/Kg dry	1	L-04	SW-846 8260C	4/1/19	4/1/19 15:43	MFF
m+p Xylene	ND	0.0035	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
o-Xylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	96.9	70-130	4/1/19 15:43
Toluene-d8	97.4	70-130	4/1/19 15:43
4-Bromofluorobenzene	96.6	70-130	4/1/19 15:43

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-108 (0-5)

Sampled: 3/27/2019 13:15

Sample ID: 19C1572-02

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
Acenaphthylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
Acetophenone	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
Aniline	ND	0.36	mg/Kg dry	1	V-34	SW-846 8270D	4/2/19	4/3/19 16:09	IMR
Anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
Benzo(a)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
Benzo(a)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
Benzo(b)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
Benzo(g,h,i)perylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
Benzo(k)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
Bis(2-chloroethoxy)methane	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
Bis(2-chloroethyl)ether	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
Bis(2-chloroisopropyl)ether	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
4-Bromophenylphenylether	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
Butylbenzylphthalate	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
4-Chloroaniline	ND	0.69	mg/Kg dry	1	V-34	SW-846 8270D	4/2/19	4/3/19 16:09	IMR
2-Chloronaphthalene	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
2-Chlorophenol	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
Chrysene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
Dibenz(a,h)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
Dibenzofuran	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
Di-n-butylphthalate	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
1,2-Dichlorobenzene	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
1,3-Dichlorobenzene	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
1,4-Dichlorobenzene	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
3,3-Dichlorobenzidine	ND	0.18	mg/Kg dry	1	V-34	SW-846 8270D	4/2/19	4/3/19 16:09	IMR
2,4-Dichlorophenol	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
Diethylphthalate	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
2,4-Dimethylphenol	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
Dimethylphthalate	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
2,4-Dinitrophenol	ND	0.69	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
2,4-Dinitrotoluene	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
2,6-Dinitrotoluene	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
Di-n-octylphthalate	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
Fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
Fluorene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
Hexachlorobenzene	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
Hexachlorobutadiene	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
Hexachloroethane	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
Indeno(1,2,3-cd)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
Isophorone	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
2-Methylnaphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-108 (0-5)

Sampled: 3/27/2019 13:15

Sample ID: 19C1572-02

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	0.36	mg/Kg dry	1	V-05	SW-846 8270D	4/2/19	4/3/19 16:09	IMR
3/4-Methylphenol	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
Naphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
Nitrobenzene	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
2-Nitrophenol	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
4-Nitrophenol	ND	0.69	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
Pentachlorophenol	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
Phenanthrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
Phenol	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
Pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
1,2,4-Trichlorobenzene	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
2,4,5-Trichlorophenol	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
2,4,6-Trichlorophenol	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	73.4	30-130	
Phenol-d6	82.5	30-130	
Nitrobenzene-d5	83.1	30-130	
2-Fluorobiphenyl	88.6	30-130	
2,4,6-Tribromophenol	97.3	30-130	
p-Terphenyl-d14	111	30-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-108 (0-5)

Sampled: 3/27/2019 13:15

Sample ID: 19C1572-02

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 17:08	JMB
Aroclor-1221 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 17:08	JMB
Aroclor-1232 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 17:08	JMB
Aroclor-1242 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 17:08	JMB
Aroclor-1248 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 17:08	JMB
Aroclor-1254 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 17:08	JMB
Aroclor-1260 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 17:08	JMB
Aroclor-1262 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 17:08	JMB
Aroclor-1268 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 17:08	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		99.1	30-150					4/4/19 17:08	
Decachlorobiphenyl [2]		95.7	30-150					4/4/19 17:08	
Tetrachloro-m-xylene [1]		98.6	30-150					4/4/19 17:08	
Tetrachloro-m-xylene [2]		96.8	30-150					4/4/19 17:08	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Sampled: 3/27/2019 13:15

Field Sample #: V-108 (0-5)

Sample ID: 19C1572-02

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	ND	8.8	mg/Kg dry	1		SW-846 8100 Modified	4/2/19	4/4/19 10:44	RMW
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
2-Fluorobiphenyl	75.9		40-140					4/4/19 10:44	



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Sampled: 3/27/2019 13:15

Field Sample #: V-108 (0-5)

Sample ID: 19C1572-02

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.7	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 16:41	MJH
Arsenic	5.6	1.7	mg/Kg dry	1		SW-846 6010D	4/3/19	4/5/19 13:05	EJB
Barium	30	1.7	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 16:41	MJH
Beryllium	0.28	0.17	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 16:41	MJH
Cadmium	0.19	0.17	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 16:41	MJH
Chromium	12	0.35	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 16:41	MJH
Lead	5.2	0.52	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 16:41	MJH
Mercury	ND	0.026	mg/Kg dry	1		SW-846 7471B	4/2/19	4/3/19 12:59	TBC
Nickel	9.4	0.35	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 16:41	MJH
Selenium	ND	3.5	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 16:41	MJH
Silver	0.41	0.35	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 16:41	MJH
Thallium	ND	1.7	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 22:37	EJB
Vanadium	17	0.69	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 16:41	MJH
Zinc	25	0.69	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 16:41	MJH

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-108 (0-5)

Sampled: 3/27/2019 13:15

Sample ID: 19C1572-02

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	93.8		% Wt	1		SM 2540G	4/3/19	4/4/19 0:59	AVF
Ignitability	Absent		present/absent	1		SW-846 1030	4/2/19	4/2/19 19:15	DJM
pH @21.9°C	8.2		pH Units	1	H-03	SW-846 9045C	3/30/19	3/30/19 15:04	AIA
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	3/30/19	3/31/19 10:20	KMV
Reactive Sulfide	ND	20	mg/L	1		SW-846 9030A	3/30/19	3/31/19 9:50	KMV
Specific conductance	5.7	2.0	µmhos/cm	1		SM21-22 2510B Modified	3/31/19	3/31/19 11:45	KMV

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-109 (5-10)

Sampled: 3/27/2019 13:25

Sample ID: 19C1572-03

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.15	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
Benzene	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
Bromobenzene	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
Bromochloromethane	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
Bromodichloromethane	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
Bromoform	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
Bromomethane	ND	0.015	mg/Kg dry	1	V-34	SW-846 8260C	4/1/19	4/1/19 16:08	MFF
2-Butanone (MEK)	ND	0.059	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
n-Butylbenzene	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
sec-Butylbenzene	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
tert-Butylbenzene	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
Carbon Disulfide	ND	0.0089	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
Carbon Tetrachloride	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
Chlorobenzene	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
Chlorodibromomethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
Chloroethane	ND	0.015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
Chloroform	ND	0.0059	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
Chloromethane	ND	0.015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
2-Chlorotoluene	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
4-Chlorotoluene	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
1,2-Dibromoethane (EDB)	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
Dibromomethane	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
1,2-Dichlorobenzene	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
1,3-Dichlorobenzene	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
1,4-Dichlorobenzene	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
1,1-Dichloroethane	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
1,2-Dichloroethane	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
1,1-Dichloroethylene	ND	0.0059	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
cis-1,2-Dichloroethylene	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
trans-1,2-Dichloroethylene	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
1,2-Dichloropropane	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
1,3-Dichloropropane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
2,2-Dichloropropane	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
1,1-Dichloropropene	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
cis-1,3-Dichloropropene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
trans-1,3-Dichloropropene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
Diethyl Ether	ND	0.015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
Diisopropyl Ether (DIPE)	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
1,4-Dioxane	ND	0.15	mg/Kg dry	1	V-16	SW-846 8260C	4/1/19	4/1/19 16:08	MFF
Ethylbenzene	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-109 (5-10)

Sampled: 3/27/2019 13:25

Sample ID: 19C1572-03

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
2-Hexanone (MBK)	ND	0.030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
Isopropylbenzene (Cumene)	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0059	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
Methylene Chloride	ND	0.015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
Naphthalene	ND	0.0059	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
n-Propylbenzene	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
Styrene	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
1,1,1,2-Tetrachloroethane	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
1,1,2,2-Tetrachloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
Tetrachloroethylene	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
Tetrahydrofuran	ND	0.015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
Toluene	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
1,2,3-Trichlorobenzene	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
1,2,4-Trichlorobenzene	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
1,1,1-Trichloroethane	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
1,1,2-Trichloroethane	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
Trichloroethylene	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
Trichlorofluoromethane (Freon 11)	ND	0.015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
1,2,3-Trichloropropane	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
1,2,4-Trimethylbenzene	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
1,3,5-Trimethylbenzene	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
Vinyl Chloride	ND	0.015	mg/Kg dry	1	L-04	SW-846 8260C	4/1/19	4/1/19 16:08	MFF
m+p Xylene	ND	0.0059	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
o-Xylene	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	95.9	70-130	4/1/19 16:08
Toluene-d8	96.4	70-130	4/1/19 16:08
4-Bromofluorobenzene	96.0	70-130	4/1/19 16:08

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-109 (5-10)

Sampled: 3/27/2019 13:25

Sample ID: 19C1572-03

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
Acenaphthylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
Acetophenone	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
Aniline	ND	0.36	mg/Kg dry	1	V-34	SW-846 8270D	4/2/19	4/3/19 16:31	IMR
Anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
Benzo(a)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
Benzo(a)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
Benzo(b)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
Benzo(g,h,i)perylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
Benzo(k)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
Bis(2-chloroethoxy)methane	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
Bis(2-chloroethyl)ether	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
Bis(2-chloroisopropyl)ether	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
4-Bromophenylphenylether	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
Butylbenzylphthalate	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
4-Chloroaniline	ND	0.69	mg/Kg dry	1	V-34	SW-846 8270D	4/2/19	4/3/19 16:31	IMR
2-Chloronaphthalene	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
2-Chlorophenol	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
Chrysene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
Dibenz(a,h)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
Dibenzofuran	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
Di-n-butylphthalate	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
1,2-Dichlorobenzene	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
1,3-Dichlorobenzene	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
1,4-Dichlorobenzene	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
3,3-Dichlorobenzidine	ND	0.18	mg/Kg dry	1	V-34	SW-846 8270D	4/2/19	4/3/19 16:31	IMR
2,4-Dichlorophenol	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
Diethylphthalate	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
2,4-Dimethylphenol	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
Dimethylphthalate	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
2,4-Dinitrophenol	ND	0.69	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
2,4-Dinitrotoluene	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
2,6-Dinitrotoluene	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
Di-n-octylphthalate	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
Fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
Fluorene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
Hexachlorobenzene	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
Hexachlorobutadiene	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
Hexachloroethane	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
Indeno(1,2,3-cd)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
Isophorone	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
2-Methylnaphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-109 (5-10)

Sampled: 3/27/2019 13:25

Sample ID: 19C1572-03

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	0.36	mg/Kg dry	1	V-05	SW-846 8270D	4/2/19	4/3/19 16:31	IMR
3/4-Methylphenol	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
Naphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
Nitrobenzene	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
2-Nitrophenol	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
4-Nitrophenol	ND	0.69	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
Pentachlorophenol	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
Phenanthrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
Phenol	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
Pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
1,2,4-Trichlorobenzene	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
2,4,5-Trichlorophenol	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
2,4,6-Trichlorophenol	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	76.2	30-130	
Phenol-d6	83.9	30-130	
Nitrobenzene-d5	86.0	30-130	
2-Fluorobiphenyl	89.7	30-130	
2,4,6-Tribromophenol	96.2	30-130	
p-Terphenyl-d14	113	30-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-109 (5-10)

Sampled: 3/27/2019 13:25

Sample ID: 19C1572-03

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 17:20	JMB
Aroclor-1221 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 17:20	JMB
Aroclor-1232 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 17:20	JMB
Aroclor-1242 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 17:20	JMB
Aroclor-1248 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 17:20	JMB
Aroclor-1254 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 17:20	JMB
Aroclor-1260 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 17:20	JMB
Aroclor-1262 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 17:20	JMB
Aroclor-1268 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 17:20	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		101	30-150					4/4/19 17:20	
Decachlorobiphenyl [2]		98.1	30-150					4/4/19 17:20	
Tetrachloro-m-xylene [1]		92.0	30-150					4/4/19 17:20	
Tetrachloro-m-xylene [2]		90.1	30-150					4/4/19 17:20	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Sampled: 3/27/2019 13:25

Field Sample #: V-109 (5-10)

Sample ID: 19C1572-03

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	ND	8.7	mg/Kg dry	1		SW-846 8100 Modified	4/2/19	4/4/19 8:34	RMW
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
2-Fluorobiphenyl	73.6		40-140					4/4/19 8:34	



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-109 (5-10)

Sampled: 3/27/2019 13:25

Sample ID: 19C1572-03

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.8	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 16:47	MJH
Arsenic	6.5	1.8	mg/Kg dry	1		SW-846 6010D	4/3/19	4/5/19 13:10	EJB
Barium	33	1.8	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 16:47	MJH
Beryllium	0.28	0.18	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 16:47	MJH
Cadmium	0.21	0.18	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 16:47	MJH
Chromium	12	0.35	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 16:47	MJH
Lead	5.0	0.53	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 16:47	MJH
Mercury	ND	0.026	mg/Kg dry	1		SW-846 7471B	4/2/19	4/3/19 13:01	TBC
Nickel	9.6	0.35	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 16:47	MJH
Selenium	ND	3.5	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 16:47	MJH
Silver	0.37	0.35	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 16:47	MJH
Thallium	ND	1.8	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 22:43	EJB
Vanadium	17	0.71	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 16:47	MJH
Zinc	23	0.71	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 16:47	MJH

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-109 (5-10)

Sampled: 3/27/2019 13:25

Sample ID: 19C1572-03

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	94.2		% Wt	1		SM 2540G	4/3/19	4/4/19 0:59	AVF
Ignitability	Absent		present/absent	1		SW-846 1030	4/2/19	4/2/19 19:15	DJM
pH @22.1°C	8.1		pH Units	1	H-03	SW-846 9045C	3/30/19	3/30/19 15:04	AIA
Reactive Cyanide	ND	4.0	mg/Kg	1		SW-846 9014	3/30/19	3/31/19 10:20	KMV
Reactive Sulfide	ND	20	mg/L	1		SW-846 9030A	3/30/19	3/31/19 9:50	KMV
Specific conductance	5.8	2.0	µmhos/cm	1		SM21-22 2510B Modified	3/31/19	3/31/19 11:45	KMV

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-110 (5-10)

Sampled: 3/27/2019 13:35

Sample ID: 19C1572-04

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.11	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.0011	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
Benzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
Bromobenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
Bromochloromethane	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
Bromodichloromethane	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
Bromoform	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
Bromomethane	ND	0.011	mg/Kg dry	1	V-34	SW-846 8260C	4/1/19	4/1/19 16:32	MFF
2-Butanone (MEK)	ND	0.046	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
n-Butylbenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
sec-Butylbenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
tert-Butylbenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.0011	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
Carbon Disulfide	ND	0.0068	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
Carbon Tetrachloride	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
Chlorobenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
Chlorodibromomethane	ND	0.0011	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
Chloroethane	ND	0.011	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
Chloroform	ND	0.0046	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
Chloromethane	ND	0.011	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
2-Chlorotoluene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
4-Chlorotoluene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
1,2-Dibromoethane (EDB)	ND	0.0011	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
Dibromomethane	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
1,2-Dichlorobenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
1,3-Dichlorobenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
1,4-Dichlorobenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.011	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
1,1-Dichloroethane	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
1,2-Dichloroethane	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
1,1-Dichloroethylene	ND	0.0046	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
cis-1,2-Dichloroethylene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
trans-1,2-Dichloroethylene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
1,2-Dichloropropane	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
1,3-Dichloropropane	ND	0.0011	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
2,2-Dichloropropane	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
1,1-Dichloropropene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
cis-1,3-Dichloropropene	ND	0.0011	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
trans-1,3-Dichloropropene	ND	0.0011	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
Diethyl Ether	ND	0.011	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
Diisopropyl Ether (DIPE)	ND	0.0011	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
1,4-Dioxane	ND	0.11	mg/Kg dry	1	V-16	SW-846 8260C	4/1/19	4/1/19 16:32	MFF
Ethylbenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-110 (5-10)

Sampled: 3/27/2019 13:35

Sample ID: 19C1572-04

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
2-Hexanone (MBK)	ND	0.023	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
Isopropylbenzene (Cumene)	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0046	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
Methylene Chloride	ND	0.011	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.023	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
Naphthalene	ND	0.0046	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
n-Propylbenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
Styrene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
1,1,1,2-Tetrachloroethane	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
1,1,1,2,2-Tetrachloroethane	ND	0.0011	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
Tetrachloroethylene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
Tetrahydrofuran	ND	0.011	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
Toluene	0.0045	0.0023	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
1,2,3-Trichlorobenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
1,2,4-Trichlorobenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
1,1,1-Trichloroethane	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
1,1,2-Trichloroethane	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
Trichloroethylene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
Trichlorofluoromethane (Freon 11)	ND	0.011	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
1,2,3-Trichloropropane	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
1,2,4-Trimethylbenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
1,3,5-Trimethylbenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
Vinyl Chloride	ND	0.011	mg/Kg dry	1	L-04	SW-846 8260C	4/1/19	4/1/19 16:32	MFF
m+p Xylene	ND	0.0046	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
o-Xylene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	95.8	70-130	
Toluene-d8	96.5	70-130	
4-Bromofluorobenzene	96.0	70-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-110 (5-10)

Sampled: 3/27/2019 13:35

Sample ID: 19C1572-04

Sample Matrix: Soil

Semivolatle Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
Acenaphthylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
Acetophenone	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
Aniline	ND	0.35	mg/Kg dry	1	V-34	SW-846 8270D	4/2/19	4/3/19 16:54	IMR
Anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
Benzo(a)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
Benzo(a)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
Benzo(b)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
Benzo(g,h,i)perylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
Benzo(k)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
Bis(2-chloroethoxy)methane	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
Bis(2-chloroethyl)ether	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
Bis(2-chloroisopropyl)ether	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
4-Bromophenylphenylether	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
Butylbenzylphthalate	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
4-Chloroaniline	ND	0.68	mg/Kg dry	1	V-34	SW-846 8270D	4/2/19	4/3/19 16:54	IMR
2-Chloronaphthalene	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
2-Chlorophenol	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
Chrysene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
Dibenz(a,h)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
Dibenzofuran	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
Di-n-butylphthalate	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
1,2-Dichlorobenzene	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
1,3-Dichlorobenzene	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
1,4-Dichlorobenzene	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
3,3-Dichlorobenzidine	ND	0.18	mg/Kg dry	1	V-34	SW-846 8270D	4/2/19	4/3/19 16:54	IMR
2,4-Dichlorophenol	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
Diethylphthalate	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
2,4-Dimethylphenol	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
Dimethylphthalate	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
2,4-Dinitrophenol	ND	0.68	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
2,4-Dinitrotoluene	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
2,6-Dinitrotoluene	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
Di-n-octylphthalate	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
Fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
Fluorene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
Hexachlorobenzene	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
Hexachlorobutadiene	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
Hexachloroethane	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
Indeno(1,2,3-cd)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
Isophorone	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
2-Methylnaphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-110 (5-10)

Sampled: 3/27/2019 13:35

Sample ID: 19C1572-04

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	0.35	mg/Kg dry	1	V-05	SW-846 8270D	4/2/19	4/3/19 16:54	IMR
3/4-Methylphenol	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
Naphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
Nitrobenzene	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
2-Nitrophenol	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
4-Nitrophenol	ND	0.68	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
Pentachlorophenol	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
Phenanthrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
Phenol	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
Pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
1,2,4-Trichlorobenzene	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
2,4,5-Trichlorophenol	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
2,4,6-Trichlorophenol	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2-Fluorophenol		75.5	30-130					4/3/19 16:54	
Phenol-d6		86.9	30-130					4/3/19 16:54	
Nitrobenzene-d5		87.7	30-130					4/3/19 16:54	
2-Fluorobiphenyl		93.9	30-130					4/3/19 16:54	
2,4,6-Tribromophenol		99.4	30-130					4/3/19 16:54	
p-Terphenyl-d14		114	30-130					4/3/19 16:54	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-110 (5-10)

Sampled: 3/27/2019 13:35

Sample ID: 19C1572-04

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 17:33	JMB
Aroclor-1221 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 17:33	JMB
Aroclor-1232 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 17:33	JMB
Aroclor-1242 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 17:33	JMB
Aroclor-1248 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 17:33	JMB
Aroclor-1254 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 17:33	JMB
Aroclor-1260 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 17:33	JMB
Aroclor-1262 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 17:33	JMB
Aroclor-1268 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 17:33	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		98.1	30-150					4/4/19 17:33	
Decachlorobiphenyl [2]		95.7	30-150					4/4/19 17:33	
Tetrachloro-m-xylene [1]		94.5	30-150					4/4/19 17:33	
Tetrachloro-m-xylene [2]		92.4	30-150					4/4/19 17:33	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Sampled: 3/27/2019 13:35

Field Sample #: V-110 (5-10)

Sample ID: 19C1572-04

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	11	8.6	mg/Kg dry	1		SW-846 8100 Modified	4/2/19	4/4/19 8:55	RMW
<b>Surrogates</b>		<b>% Recovery</b>	<b>Recovery Limits</b>		<b>Flag/Qual</b>				
2-Fluorobiphenyl		74.3	40-140					4/4/19 8:55	



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-110 (5-10)

Sampled: 3/27/2019 13:35

Sample ID: 19C1572-04

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.7	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 16:53	MJH
Arsenic	6.4	1.7	mg/Kg dry	1		SW-846 6010D	4/3/19	4/5/19 13:15	EJB
Barium	26	1.7	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 16:53	MJH
Beryllium	0.26	0.17	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 16:53	MJH
Cadmium	0.23	0.17	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 16:53	MJH
Chromium	33	0.35	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 16:53	MJH
Lead	3.9	0.52	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 16:53	MJH
Mercury	ND	0.028	mg/Kg dry	1		SW-846 7471B	4/2/19	4/3/19 13:03	TBC
Nickel	11	0.35	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 16:53	MJH
Selenium	ND	3.5	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 16:53	MJH
Silver	ND	0.35	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 16:53	MJH
Thallium	ND	1.7	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 22:50	EJB
Vanadium	17	0.69	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 16:53	MJH
Zinc	24	0.69	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 16:53	MJH

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-110 (5-10)

Sampled: 3/27/2019 13:35

Sample ID: 19C1572-04

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	94.8		% Wt	1		SM 2540G	4/3/19	4/4/19 0:59	AVF
Ignitability	Absent		present/absent	1		SW-846 1030	4/2/19	4/2/19 19:15	DJM
pH @22.2°C	8.5		pH Units	1	H-03	SW-846 9045C	3/30/19	3/30/19 15:04	AIA
Reactive Cyanide	ND	4.0	mg/Kg	1		SW-846 9014	3/30/19	3/31/19 10:20	KMV
Reactive Sulfide	ND	20	mg/L	1		SW-846 9030A	3/30/19	3/31/19 9:50	KMV
Specific conductance	5.3	2.0	µmhos/cm	1		SM21-22 2510B Modified	3/31/19	3/31/19 11:45	KMV

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-111 (0-10)

Sampled: 3/27/2019 13:45

Sample ID: 19C1572-05

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.094	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00094	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
Benzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
Bromobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
Bromochloromethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
Bromodichloromethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
Bromoform	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
Bromomethane	ND	0.0094	mg/Kg dry	1	V-34	SW-846 8260C	4/1/19	4/1/19 20:16	MFF
2-Butanone (MEK)	ND	0.038	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
n-Butylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
sec-Butylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
tert-Butylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00094	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
Carbon Disulfide	ND	0.0057	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
Carbon Tetrachloride	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
Chlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
Chlorodibromomethane	ND	0.00094	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
Chloroethane	ND	0.0094	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
Chloroform	ND	0.0038	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
Chloromethane	ND	0.0094	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
2-Chlorotoluene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
4-Chlorotoluene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
1,2-Dibromoethane (EDB)	ND	0.00094	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
Dibromomethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
1,2-Dichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
1,3-Dichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
1,4-Dichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0094	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
1,1-Dichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
1,2-Dichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
1,1-Dichloroethylene	ND	0.0038	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
cis-1,2-Dichloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
trans-1,2-Dichloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
1,2-Dichloropropane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
1,3-Dichloropropane	ND	0.00094	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
2,2-Dichloropropane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
1,1-Dichloropropene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
cis-1,3-Dichloropropene	ND	0.00094	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
trans-1,3-Dichloropropene	ND	0.00094	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
Diethyl Ether	ND	0.0094	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
Diisopropyl Ether (DIPE)	ND	0.00094	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
1,4-Dioxane	ND	0.094	mg/Kg dry	1	V-16	SW-846 8260C	4/1/19	4/1/19 20:16	MFF
Ethylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-111 (0-10)

Sampled: 3/27/2019 13:45

Sample ID: 19C1572-05

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
2-Hexanone (MBK)	ND	0.019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
Isopropylbenzene (Cumene)	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0038	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
Methylene Chloride	ND	0.0094	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
Naphthalene	ND	0.0038	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
n-Propylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
Styrene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
1,1,1,2-Tetrachloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
1,1,1,2,2-Tetrachloroethane	ND	0.00094	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
Tetrachloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
Tetrahydrofuran	ND	0.0094	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
Toluene	0.0041	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
1,2,3-Trichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
1,2,4-Trichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
1,1,1-Trichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
1,1,2-Trichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
Trichloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0094	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
1,2,3-Trichloropropane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
1,2,4-Trimethylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
1,3,5-Trimethylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
Vinyl Chloride	ND	0.0094	mg/Kg dry	1	L-04	SW-846 8260C	4/1/19	4/1/19 20:16	MFF
m+p Xylene	ND	0.0038	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
o-Xylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	98.7	70-130	
Toluene-d8	97.2	70-130	
4-Bromofluorobenzene	95.0	70-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-111 (0-10)

Sampled: 3/27/2019 13:45

Sample ID: 19C1572-05

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
Acenaphthylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
Acetophenone	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
Aniline	ND	0.35	mg/Kg dry	1	V-34	SW-846 8270D	4/2/19	4/3/19 17:16	IMR
Anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
Benzo(a)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
Benzo(a)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
Benzo(b)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
Benzo(g,h,i)perylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
Benzo(k)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
Bis(2-chloroethoxy)methane	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
Bis(2-chloroethyl)ether	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
Bis(2-chloroisopropyl)ether	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
4-Bromophenylphenylether	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
Butylbenzylphthalate	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
4-Chloroaniline	ND	0.68	mg/Kg dry	1	V-34	SW-846 8270D	4/2/19	4/3/19 17:16	IMR
2-Chloronaphthalene	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
2-Chlorophenol	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
Chrysene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
Dibenz(a,h)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
Dibenzofuran	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
Di-n-butylphthalate	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
1,2-Dichlorobenzene	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
1,3-Dichlorobenzene	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
1,4-Dichlorobenzene	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
3,3-Dichlorobenzidine	ND	0.18	mg/Kg dry	1	V-34	SW-846 8270D	4/2/19	4/3/19 17:16	IMR
2,4-Dichlorophenol	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
Diethylphthalate	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
2,4-Dimethylphenol	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
Dimethylphthalate	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
2,4-Dinitrophenol	ND	0.68	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
2,4-Dinitrotoluene	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
2,6-Dinitrotoluene	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
Di-n-octylphthalate	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
Fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
Fluorene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
Hexachlorobenzene	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
Hexachlorobutadiene	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
Hexachloroethane	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
Indeno(1,2,3-cd)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
Isophorone	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
2-Methylnaphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-111 (0-10)

Sampled: 3/27/2019 13:45

Sample ID: 19C1572-05

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	0.35	mg/Kg dry	1	V-05	SW-846 8270D	4/2/19	4/3/19 17:16	IMR
3/4-Methylphenol	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
Naphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
Nitrobenzene	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
2-Nitrophenol	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
4-Nitrophenol	ND	0.68	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
Pentachlorophenol	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
Phenanthrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
Phenol	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
Pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
1,2,4-Trichlorobenzene	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
2,4,5-Trichlorophenol	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
2,4,6-Trichlorophenol	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2-Fluorophenol		80.7	30-130					4/3/19 17:16	
Phenol-d6		87.7	30-130					4/3/19 17:16	
Nitrobenzene-d5		90.6	30-130					4/3/19 17:16	
2-Fluorobiphenyl		90.5	30-130					4/3/19 17:16	
2,4,6-Tribromophenol		98.3	30-130					4/3/19 17:16	
p-Terphenyl-d14		109	30-130					4/3/19 17:16	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-111 (0-10)

Sampled: 3/27/2019 13:45

Sample ID: 19C1572-05

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.079	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 17:46	JMB
Aroclor-1221 [1]	ND	0.079	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 17:46	JMB
Aroclor-1232 [1]	ND	0.079	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 17:46	JMB
Aroclor-1242 [1]	ND	0.079	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 17:46	JMB
Aroclor-1248 [1]	ND	0.079	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 17:46	JMB
Aroclor-1254 [1]	ND	0.079	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 17:46	JMB
Aroclor-1260 [1]	ND	0.079	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 17:46	JMB
Aroclor-1262 [1]	ND	0.079	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 17:46	JMB
Aroclor-1268 [1]	ND	0.079	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 17:46	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		97.3	30-150					4/4/19 17:46	
Decachlorobiphenyl [2]		92.2	30-150					4/4/19 17:46	
Tetrachloro-m-xylene [1]		101	30-150					4/4/19 17:46	
Tetrachloro-m-xylene [2]		97.5	30-150					4/4/19 17:46	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Sampled: 3/27/2019 13:45

Field Sample #: V-111 (0-10)

Sample ID: 19C1572-05

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	13	8.6	mg/Kg dry	1		SW-846 8100 Modified	4/2/19	4/4/19 10:16	RMW
<b>Surrogates</b>		<b>% Recovery</b>	<b>Recovery Limits</b>		<b>Flag/Qual</b>				
2-Fluorobiphenyl		81.4	40-140					4/4/19 10:16	



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Sampled: 3/27/2019 13:45

Field Sample #: V-111 (0-10)

Sample ID: 19C1572-05

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.7	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 17:00	MJH
Arsenic	11	1.7	mg/Kg dry	1		SW-846 6010D	4/3/19	4/5/19 13:20	EJB
Barium	32	1.7	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 17:00	MJH
Beryllium	0.31	0.17	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 17:00	MJH
Cadmium	0.37	0.17	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 17:00	MJH
Chromium	11	0.34	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 17:00	MJH
Lead	5.6	0.52	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 17:00	MJH
Mercury	ND	0.026	mg/Kg dry	1		SW-846 7471B	4/2/19	4/3/19 13:04	TBC
Nickel	11	0.34	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 17:00	MJH
Selenium	ND	3.4	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 17:00	MJH
Silver	0.44	0.34	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 17:00	MJH
Thallium	ND	1.7	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 22:56	EJB
Vanadium	17	0.69	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 17:00	MJH
Zinc	25	0.69	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 17:00	MJH

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-111 (0-10)

Sampled: 3/27/2019 13:45

Sample ID: 19C1572-05

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	95.2		% Wt	1		SM 2540G	4/3/19	4/4/19 0:59	AVF
Ignitability	Absent		present/absent	1		SW-846 1030	4/2/19	4/2/19 19:15	DJM
pH @22°C	8.2		pH Units	1	H-03	SW-846 9045C	3/30/19	3/30/19 15:04	AIA
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	3/30/19	3/31/19 10:20	KMV
Reactive Sulfide	ND	20	mg/L	1		SW-846 9030A	3/30/19	3/31/19 9:50	KMV
Specific conductance	6.5	2.0	µmhos/cm	1		SM21-22 2510B Modified	3/31/19	3/31/19 11:45	KMV

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-112 (0-5)

Sampled: 3/27/2019 14:00

Sample ID: 19C1572-06

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.093	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00093	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
Benzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
Bromobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
Bromochloromethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
Bromodichloromethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
Bromoform	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
Bromomethane	ND	0.0093	mg/Kg dry	1	V-34	SW-846 8260C	4/1/19	4/1/19 20:40	MFF
2-Butanone (MEK)	ND	0.037	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
n-Butylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
sec-Butylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
tert-Butylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00093	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
Carbon Disulfide	ND	0.0056	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
Carbon Tetrachloride	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
Chlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
Chlorodibromomethane	ND	0.00093	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
Chloroethane	ND	0.0093	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
Chloroform	ND	0.0037	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
Chloromethane	ND	0.0093	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
2-Chlorotoluene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
4-Chlorotoluene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
1,2-Dibromoethane (EDB)	ND	0.00093	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
Dibromomethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
1,2-Dichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
1,3-Dichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
1,4-Dichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0093	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
1,1-Dichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
1,2-Dichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
1,1-Dichloroethylene	ND	0.0037	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
cis-1,2-Dichloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
trans-1,2-Dichloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
1,2-Dichloropropane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
1,3-Dichloropropane	ND	0.00093	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
2,2-Dichloropropane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
1,1-Dichloropropene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
cis-1,3-Dichloropropene	ND	0.00093	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
trans-1,3-Dichloropropene	ND	0.00093	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
Diethyl Ether	ND	0.0093	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
Diisopropyl Ether (DIPE)	ND	0.00093	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
1,4-Dioxane	ND	0.093	mg/Kg dry	1	V-16	SW-846 8260C	4/1/19	4/1/19 20:40	MFF
Ethylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-112 (0-5)

Sampled: 3/27/2019 14:00

Sample ID: 19C1572-06

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
2-Hexanone (MBK)	ND	0.019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
Isopropylbenzene (Cumene)	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0037	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
Methylene Chloride	ND	0.0093	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
Naphthalene	ND	0.0037	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
n-Propylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
Styrene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
1,1,1,2-Tetrachloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
1,1,1,2,2-Tetrachloroethane	ND	0.00093	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
Tetrachloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
Tetrahydrofuran	ND	0.0093	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
Toluene	0.0030	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
1,2,3-Trichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
1,2,4-Trichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
1,1,1-Trichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
1,1,2-Trichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
Trichloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0093	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
1,2,3-Trichloropropane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
1,2,4-Trimethylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
1,3,5-Trimethylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
Vinyl Chloride	ND	0.0093	mg/Kg dry	1	L-04	SW-846 8260C	4/1/19	4/1/19 20:40	MFF
m+p Xylene	ND	0.0037	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
o-Xylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	95.7	70-130	
Toluene-d8	96.8	70-130	
4-Bromofluorobenzene	95.6	70-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-112 (0-5)

Sampled: 3/27/2019 14:00

Sample ID: 19C1572-06

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
Acenaphthylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
Acetophenone	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
Aniline	ND	0.35	mg/Kg dry	1	V-34	SW-846 8270D	4/2/19	4/3/19 17:38	IMR
Anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
Benzo(a)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
Benzo(a)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
Benzo(b)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
Benzo(g,h,i)perylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
Benzo(k)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
Bis(2-chloroethoxy)methane	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
Bis(2-chloroethyl)ether	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
Bis(2-chloroisopropyl)ether	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
4-Bromophenylphenylether	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
Butylbenzylphthalate	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
4-Chloroaniline	ND	0.68	mg/Kg dry	1	V-34	SW-846 8270D	4/2/19	4/3/19 17:38	IMR
2-Chloronaphthalene	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
2-Chlorophenol	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
Chrysene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
Dibenz(a,h)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
Dibenzofuran	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
Di-n-butylphthalate	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
1,2-Dichlorobenzene	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
1,3-Dichlorobenzene	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
1,4-Dichlorobenzene	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
3,3-Dichlorobenzidine	ND	0.18	mg/Kg dry	1	V-34	SW-846 8270D	4/2/19	4/3/19 17:38	IMR
2,4-Dichlorophenol	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
Diethylphthalate	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
2,4-Dimethylphenol	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
Dimethylphthalate	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
2,4-Dinitrophenol	ND	0.68	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
2,4-Dinitrotoluene	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
2,6-Dinitrotoluene	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
Di-n-octylphthalate	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
Fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
Fluorene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
Hexachlorobenzene	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
Hexachlorobutadiene	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
Hexachloroethane	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
Indeno(1,2,3-cd)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
Isophorone	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
2-Methylnaphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-112 (0-5)

Sampled: 3/27/2019 14:00

Sample ID: 19C1572-06

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	0.35	mg/Kg dry	1	V-05	SW-846 8270D	4/2/19	4/3/19 17:38	IMR
3/4-Methylphenol	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
Naphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
Nitrobenzene	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
2-Nitrophenol	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
4-Nitrophenol	ND	0.68	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
Pentachlorophenol	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
Phenanthrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
Phenol	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
Pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
1,2,4-Trichlorobenzene	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
2,4,5-Trichlorophenol	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
2,4,6-Trichlorophenol	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2-Fluorophenol		65.6	30-130					4/3/19 17:38	
Phenol-d6		73.2	30-130					4/3/19 17:38	
Nitrobenzene-d5		72.2	30-130					4/3/19 17:38	
2-Fluorobiphenyl		78.4	30-130					4/3/19 17:38	
2,4,6-Tribromophenol		92.8	30-130					4/3/19 17:38	
p-Terphenyl-d14		99.9	30-130					4/3/19 17:38	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-112 (0-5)

Sampled: 3/27/2019 14:00

Sample ID: 19C1572-06

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.079	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 17:59	JMB
Aroclor-1221 [1]	ND	0.079	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 17:59	JMB
Aroclor-1232 [1]	ND	0.079	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 17:59	JMB
Aroclor-1242 [1]	ND	0.079	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 17:59	JMB
Aroclor-1248 [1]	ND	0.079	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 17:59	JMB
Aroclor-1254 [1]	ND	0.079	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 17:59	JMB
Aroclor-1260 [1]	ND	0.079	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 17:59	JMB
Aroclor-1262 [1]	ND	0.079	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 17:59	JMB
Aroclor-1268 [1]	ND	0.079	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 17:59	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		97.6	30-150					4/4/19 17:59	
Decachlorobiphenyl [2]		91.5	30-150					4/4/19 17:59	
Tetrachloro-m-xylene [1]		99.7	30-150					4/4/19 17:59	
Tetrachloro-m-xylene [2]		96.5	30-150					4/4/19 17:59	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Sampled: 3/27/2019 14:00

Field Sample #: V-112 (0-5)

Sample ID: 19C1572-06

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	ND	8.6	mg/Kg dry	1		SW-846 8100 Modified	4/2/19	4/4/19 9:15	RMW
<b>Surrogates</b>		<b>% Recovery</b>	<b>Recovery Limits</b>		<b>Flag/Qual</b>				
2-Fluorobiphenyl		73.1	40-140					4/4/19 9:15	



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-112 (0-5)

Sampled: 3/27/2019 14:00

Sample ID: 19C1572-06

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.8	mg/Kg dry	1	MS-07	SW-846 6010D	4/3/19	4/4/19 15:47	MJH
Arsenic	5.0	1.8	mg/Kg dry	1		SW-846 6010D	4/3/19	4/5/19 12:19	EJB
Barium	21	1.8	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 15:47	MJH
Beryllium	0.25	0.18	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 15:47	MJH
Cadmium	ND	0.18	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 15:47	MJH
Chromium	9.1	0.35	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 15:47	MJH
Lead	3.9	0.53	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 15:47	MJH
Mercury	ND	0.027	mg/Kg dry	1		SW-846 7471B	4/2/19	4/3/19 13:06	TBC
Nickel	7.1	0.35	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 15:47	MJH
Selenium	ND	3.5	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 15:47	MJH
Silver	ND	0.35	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 15:47	MJH
Thallium	ND	1.8	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 21:40	EJB
Vanadium	12	0.71	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 15:47	MJH
Zinc	17	0.71	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 15:47	MJH

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-112 (0-5)

Sampled: 3/27/2019 14:00

Sample ID: 19C1572-06

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	94.5		% Wt	1		SM 2540G	4/3/19	4/4/19 0:59	AVF
Ignitability	Absent		present/absent	1		SW-846 1030	4/2/19	4/2/19 19:15	DJM
pH @20.7°C	6.3		pH Units	1	H-03	SW-846 9045C	3/30/19	3/30/19 15:04	AIA
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	3/30/19	3/31/19 10:20	KMV
Reactive Sulfide	ND	20	mg/L	1		SW-846 9030A	3/30/19	3/31/19 9:50	KMV
Specific conductance	4.7	2.0	µmhos/cm	1		SM21-22 2510B Modified	4/1/19	4/1/19 11:30	EC

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-113 (0-5)

Sampled: 3/28/2019 11:00

Sample ID: 19C1572-07

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.089	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00089	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
Benzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
Bromobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
Bromochloromethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
Bromodichloromethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
Bromoform	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
Bromomethane	ND	0.0089	mg/Kg dry	1	V-34	SW-846 8260C	4/1/19	4/1/19 21:04	MFF
2-Butanone (MEK)	ND	0.036	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
n-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
sec-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
tert-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00089	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
Carbon Disulfide	ND	0.0053	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
Carbon Tetrachloride	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
Chlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
Chlorodibromomethane	ND	0.00089	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
Chloroethane	ND	0.0089	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
Chloroform	ND	0.0036	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
Chloromethane	ND	0.0089	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
2-Chlorotoluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
4-Chlorotoluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
1,2-Dibromoethane (EDB)	ND	0.00089	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
Dibromomethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
1,2-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
1,3-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
1,4-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0089	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
1,1-Dichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
1,2-Dichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
1,1-Dichloroethylene	ND	0.0036	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
cis-1,2-Dichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
trans-1,2-Dichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
1,2-Dichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
1,3-Dichloropropane	ND	0.00089	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
2,2-Dichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
1,1-Dichloropropene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
cis-1,3-Dichloropropene	ND	0.00089	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
trans-1,3-Dichloropropene	ND	0.00089	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
Diethyl Ether	ND	0.0089	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
Diisopropyl Ether (DIPE)	ND	0.00089	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
1,4-Dioxane	ND	0.089	mg/Kg dry	1	V-16	SW-846 8260C	4/1/19	4/1/19 21:04	MFF
Ethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-113 (0-5)

Sampled: 3/28/2019 11:00

Sample ID: 19C1572-07

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
2-Hexanone (MBK)	ND	0.018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
Isopropylbenzene (Cumene)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0036	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
Methylene Chloride	ND	0.0089	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
Naphthalene	ND	0.0036	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
n-Propylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
Styrene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
1,1,1,2-Tetrachloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
1,1,1,2,2-Tetrachloroethane	ND	0.00089	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
Tetrachloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
Tetrahydrofuran	ND	0.0089	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
Toluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
1,2,3-Trichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
1,2,4-Trichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
1,1,1-Trichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
1,1,2-Trichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
Trichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0089	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
1,2,3-Trichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
1,2,4-Trimethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
1,3,5-Trimethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
Vinyl Chloride	ND	0.0089	mg/Kg dry	1	L-04	SW-846 8260C	4/1/19	4/1/19 21:04	MFF
m+p Xylene	ND	0.0036	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
o-Xylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	96.4	70-130	4/1/19 21:04
Toluene-d8	95.8	70-130	4/1/19 21:04
4-Bromofluorobenzene	94.6	70-130	4/1/19 21:04

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-113 (0-5)

Sampled: 3/28/2019 11:00

Sample ID: 19C1572-07

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
Acenaphthylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
Acetophenone	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
Aniline	ND	0.36	mg/Kg dry	1	V-34	SW-846 8270D	4/2/19	4/3/19 18:00	IMR
Anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
Benzo(a)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
Benzo(a)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
Benzo(b)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
Benzo(g,h,i)perylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
Benzo(k)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
Bis(2-chloroethoxy)methane	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
Bis(2-chloroethyl)ether	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
Bis(2-chloroisopropyl)ether	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
4-Bromophenylphenylether	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
Butylbenzylphthalate	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
4-Chloroaniline	ND	0.71	mg/Kg dry	1	V-34	SW-846 8270D	4/2/19	4/3/19 18:00	IMR
2-Chloronaphthalene	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
2-Chlorophenol	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
Chrysene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
Dibenz(a,h)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
Dibenzofuran	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
Di-n-butylphthalate	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
1,2-Dichlorobenzene	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
1,3-Dichlorobenzene	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
1,4-Dichlorobenzene	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
3,3-Dichlorobenzidine	ND	0.18	mg/Kg dry	1	V-34	SW-846 8270D	4/2/19	4/3/19 18:00	IMR
2,4-Dichlorophenol	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
Diethylphthalate	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
2,4-Dimethylphenol	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
Dimethylphthalate	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
2,4-Dinitrophenol	ND	0.71	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
2,4-Dinitrotoluene	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
2,6-Dinitrotoluene	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
Di-n-octylphthalate	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
Fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
Fluorene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
Hexachlorobenzene	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
Hexachlorobutadiene	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
Hexachloroethane	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
Indeno(1,2,3-cd)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
Isophorone	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
2-Methylnaphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-113 (0-5)

Sampled: 3/28/2019 11:00

Sample ID: 19C1572-07

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	0.36	mg/Kg dry	1	V-05	SW-846 8270D	4/2/19	4/3/19 18:00	IMR
3/4-Methylphenol	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
Naphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
Nitrobenzene	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
2-Nitrophenol	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
4-Nitrophenol	ND	0.71	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
Pentachlorophenol	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
Phenanthrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
Phenol	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
Pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
1,2,4-Trichlorobenzene	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
2,4,5-Trichlorophenol	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
2,4,6-Trichlorophenol	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2-Fluorophenol		78.8	30-130					4/3/19 18:00	
Phenol-d6		87.4	30-130					4/3/19 18:00	
Nitrobenzene-d5		87.4	30-130					4/3/19 18:00	
2-Fluorobiphenyl		87.6	30-130					4/3/19 18:00	
2,4,6-Tribromophenol		102	30-130					4/3/19 18:00	
p-Terphenyl-d14		110	30-130					4/3/19 18:00	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-113 (0-5)

Sampled: 3/28/2019 11:00

Sample ID: 19C1572-07

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.080	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 18:12	JMB
Aroclor-1221 [1]	ND	0.080	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 18:12	JMB
Aroclor-1232 [1]	ND	0.080	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 18:12	JMB
Aroclor-1242 [1]	ND	0.080	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 18:12	JMB
Aroclor-1248 [1]	ND	0.080	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 18:12	JMB
Aroclor-1254 [1]	ND	0.080	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 18:12	JMB
Aroclor-1260 [1]	ND	0.080	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 18:12	JMB
Aroclor-1262 [1]	ND	0.080	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 18:12	JMB
Aroclor-1268 [1]	ND	0.080	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 18:12	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		106	30-150					4/4/19 18:12	
Decachlorobiphenyl [2]		101	30-150					4/4/19 18:12	
Tetrachloro-m-xylene [1]		105	30-150					4/4/19 18:12	
Tetrachloro-m-xylene [2]		101	30-150					4/4/19 18:12	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-113 (0-5)

Sampled: 3/28/2019 11:00

Sample ID: 19C1572-07

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	ND	8.9	mg/Kg dry	1		SW-846 8100 Modified	4/2/19	4/4/19 9:35	RMW
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
2-Fluorobiphenyl	75.0		40-140					4/4/19 9:35	



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-113 (0-5)

Sampled: 3/28/2019 11:00

Sample ID: 19C1572-07

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.8	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 17:07	MJH
Arsenic	2.8	1.8	mg/Kg dry	1		SW-846 6010D	4/3/19	4/5/19 13:25	EJB
Barium	15	1.8	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 17:07	MJH
Beryllium	ND	0.18	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 17:07	MJH
Cadmium	ND	0.18	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 17:07	MJH
Chromium	11	0.36	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 17:07	MJH
Lead	2.3	0.54	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 17:07	MJH
Mercury	ND	0.026	mg/Kg dry	1		SW-846 7471B	4/2/19	4/3/19 13:07	TBC
Nickel	4.8	0.36	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 17:07	MJH
Selenium	ND	3.6	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 17:07	MJH
Silver	ND	0.36	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 17:07	MJH
Thallium	ND	1.8	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 23:03	EJB
Vanadium	9.6	0.72	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 17:07	MJH
Zinc	11	0.72	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 17:07	MJH

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-113 (0-5)

Sampled: 3/28/2019 11:00

Sample ID: 19C1572-07

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	93.3		% Wt	1		SM 2540G	4/3/19	4/4/19 0:59	AVF
Ignitability	Absent		present/absent	1		SW-846 1030	4/2/19	4/2/19 19:15	DJM
pH @20.4°C	6.5		pH Units	1	H-03	SW-846 9045C	3/30/19	3/30/19 15:04	AIA
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	3/30/19	3/31/19 10:20	KMV
Reactive Sulfide	ND	20	mg/L	1		SW-846 9030A	3/30/19	3/31/19 9:50	KMV
Specific conductance	ND	2.0	µmhos/cm	1		SM21-22 2510B Modified	4/1/19	4/1/19 11:30	EC

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-114 (5-10)

Sampled: 3/28/2019 11:35

Sample ID: 19C1572-08

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.10	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.0010	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
Benzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
Bromobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
Bromochloromethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
Bromodichloromethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
Bromoform	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
Bromomethane	ND	0.010	mg/Kg dry	1	V-34	SW-846 8260C	4/1/19	4/1/19 21:29	MFF
2-Butanone (MEK)	ND	0.042	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
n-Butylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
sec-Butylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
tert-Butylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.0010	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
Carbon Disulfide	ND	0.0062	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
Carbon Tetrachloride	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
Chlorobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
Chlorodibromomethane	ND	0.0010	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
Chloroethane	ND	0.010	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
Chloroform	ND	0.0042	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
Chloromethane	ND	0.010	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
2-Chlorotoluene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
4-Chlorotoluene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
1,2-Dibromoethane (EDB)	ND	0.0010	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
Dibromomethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
1,2-Dichlorobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
1,3-Dichlorobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
1,4-Dichlorobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.010	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
1,1-Dichloroethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
1,2-Dichloroethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
1,1-Dichloroethylene	ND	0.0042	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
cis-1,2-Dichloroethylene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
trans-1,2-Dichloroethylene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
1,2-Dichloropropane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
1,3-Dichloropropane	ND	0.0010	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
2,2-Dichloropropane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
1,1-Dichloropropene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
cis-1,3-Dichloropropene	ND	0.0010	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
trans-1,3-Dichloropropene	ND	0.0010	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
Diethyl Ether	ND	0.010	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
Diisopropyl Ether (DIPE)	ND	0.0010	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
1,4-Dioxane	ND	0.10	mg/Kg dry	1	V-16	SW-846 8260C	4/1/19	4/1/19 21:29	MFF
Ethylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-114 (5-10)

Sampled: 3/28/2019 11:35

Sample ID: 19C1572-08

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
2-Hexanone (MBK)	ND	0.021	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
Isopropylbenzene (Cumene)	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0042	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
Methylene Chloride	ND	0.010	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.021	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
Naphthalene	ND	0.0042	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
n-Propylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
Styrene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
1,1,1,2-Tetrachloroethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
1,1,2,2-Tetrachloroethane	ND	0.0010	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
Tetrachloroethylene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
Tetrahydrofuran	ND	0.010	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
Toluene	0.0068	0.0021	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
1,2,3-Trichlorobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
1,2,4-Trichlorobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
1,1,1-Trichloroethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
1,1,2-Trichloroethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
Trichloroethylene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
Trichlorofluoromethane (Freon 11)	ND	0.010	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
1,2,3-Trichloropropane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
1,2,4-Trimethylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
1,3,5-Trimethylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
Vinyl Chloride	ND	0.010	mg/Kg dry	1	L-04	SW-846 8260C	4/1/19	4/1/19 21:29	MFF
m+p Xylene	ND	0.0042	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
o-Xylene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	99.1	70-130	4/1/19 21:29
Toluene-d8	96.3	70-130	4/1/19 21:29
4-Bromofluorobenzene	97.4	70-130	4/1/19 21:29

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-114 (5-10)

Sampled: 3/28/2019 11:35

Sample ID: 19C1572-08

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
Acenaphthylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
Acetophenone	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
Aniline	ND	0.36	mg/Kg dry	1	V-34	SW-846 8270D	4/2/19	4/3/19 18:23	IMR
Anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
Benzo(a)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
Benzo(a)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
Benzo(b)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
Benzo(g,h,i)perylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
Benzo(k)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
Bis(2-chloroethoxy)methane	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
Bis(2-chloroethyl)ether	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
Bis(2-chloroisopropyl)ether	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
4-Bromophenylphenylether	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
Butylbenzylphthalate	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
4-Chloroaniline	ND	0.69	mg/Kg dry	1	V-34	SW-846 8270D	4/2/19	4/3/19 18:23	IMR
2-Chloronaphthalene	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
2-Chlorophenol	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
Chrysene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
Dibenz(a,h)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
Dibenzofuran	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
Di-n-butylphthalate	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
1,2-Dichlorobenzene	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
1,3-Dichlorobenzene	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
1,4-Dichlorobenzene	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
3,3-Dichlorobenzidine	ND	0.18	mg/Kg dry	1	V-34	SW-846 8270D	4/2/19	4/3/19 18:23	IMR
2,4-Dichlorophenol	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
Diethylphthalate	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
2,4-Dimethylphenol	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
Dimethylphthalate	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
2,4-Dinitrophenol	ND	0.69	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
2,4-Dinitrotoluene	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
2,6-Dinitrotoluene	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
Di-n-octylphthalate	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
Fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
Fluorene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
Hexachlorobenzene	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
Hexachlorobutadiene	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
Hexachloroethane	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
Indeno(1,2,3-cd)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
Isophorone	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
2-Methylnaphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-114 (5-10)

Sampled: 3/28/2019 11:35

Sample ID: 19C1572-08

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	0.36	mg/Kg dry	1	V-05	SW-846 8270D	4/2/19	4/3/19 18:23	IMR
3/4-Methylphenol	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
Naphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
Nitrobenzene	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
2-Nitrophenol	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
4-Nitrophenol	ND	0.69	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
Pentachlorophenol	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
Phenanthrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
Phenol	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
Pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
1,2,4-Trichlorobenzene	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
2,4,5-Trichlorophenol	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
2,4,6-Trichlorophenol	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	85.4	30-130	
Phenol-d6	92.8	30-130	
Nitrobenzene-d5	94.9	30-130	
2-Fluorobiphenyl	97.5	30-130	
2,4,6-Tribromophenol	105	30-130	
p-Terphenyl-d14	113	30-130	

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Project Location: Wayland, MA

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Field Sample #: V-114 (5-10)

Sampled: 3/28/2019 11:35

Sample ID: 19C1572-08

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 18:25	JMB
Aroclor-1221 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 18:25	JMB
Aroclor-1232 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 18:25	JMB
Aroclor-1242 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 18:25	JMB
Aroclor-1248 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 18:25	JMB
Aroclor-1254 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 18:25	JMB
Aroclor-1260 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 18:25	JMB
Aroclor-1262 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 18:25	JMB
Aroclor-1268 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 18:25	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		108	30-150					4/4/19 18:25	
Decachlorobiphenyl [2]		100	30-150					4/4/19 18:25	
Tetrachloro-m-xylene [1]		104	30-150					4/4/19 18:25	
Tetrachloro-m-xylene [2]		102	30-150					4/4/19 18:25	

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Work Order: 19C1572

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Sampled: 3/28/2019 11:35

Field Sample #: V-114 (5-10)

Sample ID: 19C1572-08

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	27	8.7	mg/Kg dry	1		SW-846 8100 Modified	4/2/19	4/4/19 9:55	RMW
<b>Surrogates</b>		<b>% Recovery</b>	<b>Recovery Limits</b>		<b>Flag/Qual</b>				
2-Fluorobiphenyl		76.7	40-140					4/4/19 9:55	



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Work Order: 19C1572

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Sampled: 3/28/2019 11:35

Field Sample #: V-114 (5-10)

Sample ID: 19C1572-08

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.7	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 17:13	MJH
Arsenic	4.5	1.7	mg/Kg dry	1		SW-846 6010D	4/3/19	4/5/19 13:30	EJB
Barium	31	1.7	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 17:13	MJH
Beryllium	0.26	0.17	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 17:13	MJH
Cadmium	ND	0.17	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 17:13	MJH
Chromium	15	0.34	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 17:13	MJH
Lead	5.8	0.51	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 17:13	MJH
Mercury	ND	0.026	mg/Kg dry	1		SW-846 7471B	4/2/19	4/3/19 13:09	TBC
Nickel	12	0.34	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 17:13	MJH
Selenium	ND	3.4	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 17:13	MJH
Silver	0.57	0.34	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 17:13	MJH
Thallium	ND	1.7	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 23:09	EJB
Vanadium	23	0.68	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 17:13	MJH
Zinc	30	0.68	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 17:13	MJH

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Project Location: Wayland, MA

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Work Order: 19C1572

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Field Sample #: V-114 (5-10)

Sampled: 3/28/2019 11:35

Sample ID: 19C1572-08

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	95.4		% Wt	1		SM 2540G	4/3/19	4/4/19 0:59	AVF
Ignitability	Absent		present/absent	1		SW-846 1030	4/2/19	4/2/19 19:15	DJM
pH @20.3°C	6.4		pH Units	1	H-03	SW-846 9045C	3/30/19	3/30/19 15:04	AIA
Reactive Cyanide	ND	4.0	mg/Kg	1		SW-846 9014	3/30/19	3/31/19 10:20	KMV
Reactive Sulfide	ND	20	mg/L	1		SW-846 9030A	3/30/19	3/31/19 9:50	KMV
Specific conductance	2.1	2.0	µmhos/cm	1		SM21-22 2510B Modified	4/1/19	4/1/19 11:30	EC

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-115 (5-10)

Sampled: 3/28/2019 12:00

Sample ID: 19C1572-09

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 18:37	JMB
Aroclor-1221 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 18:37	JMB
Aroclor-1232 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 18:37	JMB
Aroclor-1242 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 18:37	JMB
Aroclor-1248 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 18:37	JMB
Aroclor-1254 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 18:37	JMB
Aroclor-1260 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 18:37	JMB
Aroclor-1262 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 18:37	JMB
Aroclor-1268 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 18:37	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		107	30-150					4/4/19 18:37	
Decachlorobiphenyl [2]		97.0	30-150					4/4/19 18:37	
Tetrachloro-m-xylene [1]		97.7	30-150					4/4/19 18:37	
Tetrachloro-m-xylene [2]		95.1	30-150					4/4/19 18:37	

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Sampled: 3/28/2019 12:00

Field Sample #: V-115 (5-10)

Sample ID: 19C1572-09

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	94.6		% Wt	1		SM 2540G	4/3/19	4/4/19 1:00	AVF

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-116 (0-5)

Sampled: 3/28/2019 12:30

Sample ID: 19C1572-10

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 18:50	JMB
Aroclor-1221 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 18:50	JMB
Aroclor-1232 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 18:50	JMB
Aroclor-1242 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 18:50	JMB
Aroclor-1248 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 18:50	JMB
Aroclor-1254 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 18:50	JMB
Aroclor-1260 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 18:50	JMB
Aroclor-1262 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 18:50	JMB
Aroclor-1268 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 18:50	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		103	30-150					4/4/19 18:50	
Decachlorobiphenyl [2]		97.4	30-150					4/4/19 18:50	
Tetrachloro-m-xylene [1]		106	30-150					4/4/19 18:50	
Tetrachloro-m-xylene [2]		103	30-150					4/4/19 18:50	

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-116 (0-5)

Sampled: 3/28/2019 12:30

Sample ID: 19C1572-10

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	94.6		% Wt	1		SM 2540G	4/3/19	4/4/19 1:00	AVF

**Sample Extraction Data**

**Prep Method: % Solids-SM 2540G**

Lab Number [Field ID]	Batch	Date
19C1572-01 [V-107 (5-10)]	B227324	04/03/19
19C1572-02 [V-108 (0-5)]	B227324	04/03/19
19C1572-03 [V-109 (5-10)]	B227324	04/03/19
19C1572-04 [V-110 (5-10)]	B227324	04/03/19
19C1572-05 [V-111 (0-10)]	B227324	04/03/19
19C1572-06 [V-112 (0-5)]	B227324	04/03/19
19C1572-07 [V-113 (0-5)]	B227324	04/03/19
19C1572-08 [V-114 (5-10)]	B227324	04/03/19
19C1572-09 [V-115 (5-10)]	B227324	04/03/19
19C1572-10 [V-116 (0-5)]	B227324	04/03/19

**SM21-22 2510B Modified**

Lab Number [Field ID]	Batch	Initial [g]	Date
19C1572-01 [V-107 (5-10)]	B227054	1.00	03/31/19
19C1572-02 [V-108 (0-5)]	B227054	1.00	03/31/19
19C1572-03 [V-109 (5-10)]	B227054	1.00	03/31/19
19C1572-04 [V-110 (5-10)]	B227054	1.00	03/31/19
19C1572-05 [V-111 (0-10)]	B227054	1.00	03/31/19

**SM21-22 2510B Modified**

Lab Number [Field ID]	Batch	Initial [g]	Date
19C1572-06 [V-112 (0-5)]	B227087	1.00	04/01/19
19C1572-07 [V-113 (0-5)]	B227087	1.00	04/01/19
19C1572-08 [V-114 (5-10)]	B227087	1.00	04/01/19

**SW-846 1030**

Lab Number [Field ID]	Batch	Initial [g]	Date
19C1572-01 [V-107 (5-10)]	B227278	50.0	04/02/19
19C1572-02 [V-108 (0-5)]	B227278	50.0	04/02/19
19C1572-03 [V-109 (5-10)]	B227278	50.0	04/02/19
19C1572-04 [V-110 (5-10)]	B227278	50.0	04/02/19
19C1572-05 [V-111 (0-10)]	B227278	50.0	04/02/19
19C1572-06 [V-112 (0-5)]	B227278	50.0	04/02/19
19C1572-07 [V-113 (0-5)]	B227278	50.0	04/02/19
19C1572-08 [V-114 (5-10)]	B227278	50.0	04/02/19

**Prep Method: SW-846 3050B-SW-846 6010D**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C1572-01 [V-107 (5-10)]	B227367	1.52	50.0	04/03/19
19C1572-02 [V-108 (0-5)]	B227367	1.54	50.0	04/03/19
19C1572-03 [V-109 (5-10)]	B227367	1.50	50.0	04/03/19
19C1572-04 [V-110 (5-10)]	B227367	1.52	50.0	04/03/19
19C1572-05 [V-111 (0-10)]	B227367	1.53	50.0	04/03/19
19C1572-06 [V-112 (0-5)]	B227367	1.50	50.0	04/03/19
19C1572-07 [V-113 (0-5)]	B227367	1.49	50.0	04/03/19
19C1572-08 [V-114 (5-10)]	B227367	1.53	50.0	04/03/19

**Sample Extraction Data**

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C1572-01 [V-107 (5-10)]	B227094	0.619	50.0	04/02/19
19C1572-02 [V-108 (0-5)]	B227094	0.606	50.0	04/02/19
19C1572-03 [V-109 (5-10)]	B227094	0.608	50.0	04/02/19
19C1572-04 [V-110 (5-10)]	B227094	0.574	50.0	04/02/19
19C1572-05 [V-111 (0-10)]	B227094	0.598	50.0	04/02/19
19C1572-06 [V-112 (0-5)]	B227094	0.594	50.0	04/02/19
19C1572-07 [V-113 (0-5)]	B227094	0.612	50.0	04/02/19
19C1572-08 [V-114 (5-10)]	B227094	0.596	50.0	04/02/19

**Prep Method: SW-846 3540C-SW-846 8082A**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C1572-01 [V-107 (5-10)]	B227240	10.2	10.0	04/02/19
19C1572-02 [V-108 (0-5)]	B227240	10.2	10.0	04/02/19
19C1572-03 [V-109 (5-10)]	B227240	10.3	10.0	04/02/19
19C1572-04 [V-110 (5-10)]	B227240	10.2	10.0	04/02/19
19C1572-05 [V-111 (0-10)]	B227240	10.6	10.0	04/02/19
19C1572-06 [V-112 (0-5)]	B227240	10.7	10.0	04/02/19
19C1572-07 [V-113 (0-5)]	B227240	10.7	10.0	04/02/19
19C1572-08 [V-114 (5-10)]	B227240	10.4	10.0	04/02/19
19C1572-09 [V-115 (5-10)]	B227240	10.3	10.0	04/02/19
19C1572-10 [V-116 (0-5)]	B227240	10.3	10.0	04/02/19

**Prep Method: SW-846 3546-SW-846 8100 Modified**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C1572-01 [V-107 (5-10)]	B227221	30.7	1.00	04/02/19
19C1572-02 [V-108 (0-5)]	B227221	30.4	1.00	04/02/19
19C1572-03 [V-109 (5-10)]	B227221	30.5	1.00	04/02/19
19C1572-04 [V-110 (5-10)]	B227221	30.7	1.00	04/02/19
19C1572-05 [V-111 (0-10)]	B227221	30.4	1.00	04/02/19
19C1572-06 [V-112 (0-5)]	B227221	30.6	1.00	04/02/19
19C1572-07 [V-113 (0-5)]	B227221	30.0	1.00	04/02/19
19C1572-08 [V-114 (5-10)]	B227221	30.0	1.00	04/02/19

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C1572-01 [V-107 (5-10)]	B227113	6.78	10.0	04/01/19
19C1572-02 [V-108 (0-5)]	B227113	6.06	10.0	04/01/19
19C1572-03 [V-109 (5-10)]	B227113	3.60	10.0	04/01/19
19C1572-04 [V-110 (5-10)]	B227113	4.62	10.0	04/01/19

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C1572-05 [V-111 (0-10)]	B227135	5.57	10.0	04/01/19
19C1572-06 [V-112 (0-5)]	B227135	5.67	10.0	04/01/19
19C1572-07 [V-113 (0-5)]	B227135	6.01	10.0	04/01/19



**Sample Extraction Data**

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C1572-08 [V-114 (5-10)]	B227135	5.04	10.0	04/01/19

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C1572-01 [V-107 (5-10)]	B227222	30.7	1.00	04/02/19
19C1572-02 [V-108 (0-5)]	B227222	30.4	1.00	04/02/19
19C1572-03 [V-109 (5-10)]	B227222	30.5	1.00	04/02/19
19C1572-04 [V-110 (5-10)]	B227222	30.7	1.00	04/02/19
19C1572-05 [V-111 (0-10)]	B227222	30.4	1.00	04/02/19
19C1572-06 [V-112 (0-5)]	B227222	30.6	1.00	04/02/19
19C1572-07 [V-113 (0-5)]	B227222	30.0	1.00	04/02/19
19C1572-08 [V-114 (5-10)]	B227222	30.0	1.00	04/02/19

**SW-846 9014**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C1572-01 [V-107 (5-10)]	B227022	25.7	250	03/30/19
19C1572-02 [V-108 (0-5)]	B227022	25.4	250	03/30/19
19C1572-03 [V-109 (5-10)]	B227022	25.2	250	03/30/19
19C1572-04 [V-110 (5-10)]	B227022	25.2	250	03/30/19
19C1572-05 [V-111 (0-10)]	B227022	25.4	250	03/30/19
19C1572-06 [V-112 (0-5)]	B227022	25.5	250	03/30/19
19C1572-07 [V-113 (0-5)]	B227022	25.4	250	03/30/19
19C1572-08 [V-114 (5-10)]	B227022	25.2	250	03/30/19

**SW-846 9030A**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
19C1572-01 [V-107 (5-10)]	B227024	25.7	250	03/30/19
19C1572-02 [V-108 (0-5)]	B227024	25.4	250	03/30/19
19C1572-03 [V-109 (5-10)]	B227024	25.2	250	03/30/19
19C1572-04 [V-110 (5-10)]	B227024	25.2	250	03/30/19
19C1572-05 [V-111 (0-10)]	B227024	25.4	250	03/30/19
19C1572-06 [V-112 (0-5)]	B227024	25.5	250	03/30/19
19C1572-07 [V-113 (0-5)]	B227024	25.4	250	03/30/19
19C1572-08 [V-114 (5-10)]	B227024	25.2	250	03/30/19

**SW-846 9045C**

Lab Number [Field ID]	Batch	Initial [g]	Date
19C1572-01 [V-107 (5-10)]	B227052	20.0	03/30/19
19C1572-02 [V-108 (0-5)]	B227052	20.0	03/30/19
19C1572-03 [V-109 (5-10)]	B227052	20.0	03/30/19
19C1572-04 [V-110 (5-10)]	B227052	20.0	03/30/19
19C1572-05 [V-111 (0-10)]	B227052	20.0	03/30/19
19C1572-06 [V-112 (0-5)]	B227052	20.0	03/30/19
19C1572-07 [V-113 (0-5)]	B227052	20.0	03/30/19
19C1572-08 [V-114 (5-10)]	B227052	20.0	03/30/19

**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 B227113 - SW-846 5035**

**Blank (B227113-BLK1)**

Prepared & Analyzed: 04/01/19

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							
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							
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 B227113 - SW-846 5035**

**Blank (B227113-BLK1)**

Prepared & Analyzed: 04/01/19

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							L-04
m+p Xylene	ND	0.0040	mg/Kg wet							
o-Xylene	ND	0.0020	mg/Kg wet							
Surrogate: 1,2-Dichloroethane-d4	0.0475		mg/Kg wet	0.0500		95.0	70-130			
Surrogate: Toluene-d8	0.0483		mg/Kg wet	0.0500		96.7	70-130			
Surrogate: 4-Bromofluorobenzene	0.0480		mg/Kg wet	0.0500		95.9	70-130			

**LCS (B227113-BS1)**

Prepared & Analyzed: 04/01/19

Acetone	0.268	0.10	mg/Kg wet	0.200		134	40-160			L-14 †
tert-Amyl Methyl Ether (TAME)	0.0197	0.0010	mg/Kg wet	0.0200		98.4	70-130			
Benzene	0.0165	0.0020	mg/Kg wet	0.0200		82.4	70-130			
Bromobenzene	0.0201	0.0020	mg/Kg wet	0.0200		101	70-130			
Bromochloromethane	0.0176	0.0020	mg/Kg wet	0.0200		87.8	70-130			
Bromodichloromethane	0.0186	0.0020	mg/Kg wet	0.0200		93.0	70-130			
Bromoform	0.0231	0.0020	mg/Kg wet	0.0200		116	70-130			V-20
Bromomethane	0.0114	0.010	mg/Kg wet	0.0200		56.8	40-160			L-14, V-34 †
2-Butanone (MEK)	0.222	0.040	mg/Kg wet	0.200		111	40-160			†
n-Butylbenzene	0.0211	0.0020	mg/Kg wet	0.0200		105	70-130			
sec-Butylbenzene	0.0216	0.0020	mg/Kg wet	0.0200		108	70-130			
tert-Butylbenzene	0.0212	0.0020	mg/Kg wet	0.0200		106	70-130			
tert-Butyl Ethyl Ether (TBEE)	0.0188	0.0010	mg/Kg wet	0.0200		93.8	70-130			
Carbon Disulfide	0.0178	0.0060	mg/Kg wet	0.0200		89.2	70-130			
Carbon Tetrachloride	0.0181	0.0020	mg/Kg wet	0.0200		90.6	70-130			
Chlorobenzene	0.0201	0.0020	mg/Kg wet	0.0200		100	70-130			
Chlorodibromomethane	0.0205	0.0010	mg/Kg wet	0.0200		103	70-130			
Chloroethane	0.0182	0.010	mg/Kg wet	0.0200		91.2	70-130			
Chloroform	0.0169	0.0040	mg/Kg wet	0.0200		84.7	70-130			
Chloromethane	0.0115	0.010	mg/Kg wet	0.0200		57.3	40-160			L-14 †
2-Chlorotoluene	0.0201	0.0020	mg/Kg wet	0.0200		101	70-130			
4-Chlorotoluene	0.0201	0.0020	mg/Kg wet	0.0200		101	70-130			
1,2-Dibromo-3-chloropropane (DBCP)	0.0222	0.0020	mg/Kg wet	0.0200		111	70-130			
1,2-Dibromoethane (EDB)	0.0188	0.0010	mg/Kg wet	0.0200		94.2	70-130			
Dibromomethane	0.0172	0.0020	mg/Kg wet	0.0200		85.8	70-130			
1,2-Dichlorobenzene	0.0211	0.0020	mg/Kg wet	0.0200		105	70-130			
1,3-Dichlorobenzene	0.0214	0.0020	mg/Kg wet	0.0200		107	70-130			
1,4-Dichlorobenzene	0.0200	0.0020	mg/Kg wet	0.0200		100	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
<b>Batch B227113 - SW-846 5035</b>										
<b>LCS (B227113-BS1)</b>										
Prepared & Analyzed: 04/01/19										
Dichlorodifluoromethane (Freon 12)	0.0104	0.010	mg/Kg wet	0.0200		52.2	40-160			L-14 †
1,1-Dichloroethane	0.0173	0.0020	mg/Kg wet	0.0200		86.3	70-130			
1,2-Dichloroethane	0.0176	0.0020	mg/Kg wet	0.0200		88.2	70-130			
1,1-Dichloroethylene	0.0172	0.0040	mg/Kg wet	0.0200		86.2	70-130			
cis-1,2-Dichloroethylene	0.0173	0.0020	mg/Kg wet	0.0200		86.3	70-130			
trans-1,2-Dichloroethylene	0.0173	0.0020	mg/Kg wet	0.0200		86.4	70-130			
1,2-Dichloropropane	0.0180	0.0020	mg/Kg wet	0.0200		90.1	70-130			
1,3-Dichloropropane	0.0176	0.0010	mg/Kg wet	0.0200		88.3	70-130			
2,2-Dichloropropane	0.0184	0.0020	mg/Kg wet	0.0200		92.1	70-130			
1,1-Dichloropropene	0.0171	0.0020	mg/Kg wet	0.0200		85.6	70-130			
cis-1,3-Dichloropropene	0.0190	0.0010	mg/Kg wet	0.0200		94.9	70-130			
trans-1,3-Dichloropropene	0.0197	0.0010	mg/Kg wet	0.0200		98.4	70-130			
Diethyl Ether	0.0174	0.010	mg/Kg wet	0.0200		87.2	70-130			
Diisopropyl Ether (DIPE)	0.0178	0.0010	mg/Kg wet	0.0200		89.1	70-130			
1,4-Dioxane	0.196	0.10	mg/Kg wet	0.200		98.1	40-160			V-16 †
Ethylbenzene	0.0199	0.0020	mg/Kg wet	0.0200		99.5	70-130			
Hexachlorobutadiene	0.0231	0.0020	mg/Kg wet	0.0200		116	70-130			
2-Hexanone (MBK)	0.207	0.020	mg/Kg wet	0.200		104	40-160			†
Isopropylbenzene (Cumene)	0.0209	0.0020	mg/Kg wet	0.0200		105	70-130			
p-Isopropyltoluene (p-Cymene)	0.0214	0.0020	mg/Kg wet	0.0200		107	70-130			
Methyl tert-Butyl Ether (MTBE)	0.0241	0.0040	mg/Kg wet	0.0200		121	70-130			V-20
Methylene Chloride	0.0187	0.010	mg/Kg wet	0.0200		93.6	70-130			
4-Methyl-2-pentanone (MIBK)	0.194	0.020	mg/Kg wet	0.200		97.1	40-160			†
Naphthalene	0.0205	0.0040	mg/Kg wet	0.0200		103	70-130			
n-Propylbenzene	0.0204	0.0020	mg/Kg wet	0.0200		102	70-130			
Styrene	0.0199	0.0020	mg/Kg wet	0.0200		99.5	70-130			
1,1,1,2-Tetrachloroethane	0.0210	0.0020	mg/Kg wet	0.0200		105	70-130			
1,1,2,2-Tetrachloroethane	0.0209	0.0010	mg/Kg wet	0.0200		105	70-130			
Tetrachloroethylene	0.0190	0.0020	mg/Kg wet	0.0200		95.0	70-130			
Tetrahydrofuran	0.0192	0.010	mg/Kg wet	0.0200		95.9	70-130			
Toluene	0.0179	0.0020	mg/Kg wet	0.0200		89.6	70-130			
1,2,3-Trichlorobenzene	0.0212	0.0020	mg/Kg wet	0.0200		106	70-130			
1,2,4-Trichlorobenzene	0.0208	0.0020	mg/Kg wet	0.0200		104	70-130			
1,1,1-Trichloroethane	0.0180	0.0020	mg/Kg wet	0.0200		89.8	70-130			
1,1,2-Trichloroethane	0.0188	0.0020	mg/Kg wet	0.0200		94.2	70-130			
Trichloroethylene	0.0172	0.0020	mg/Kg wet	0.0200		85.8	70-130			
Trichlorofluoromethane (Freon 11)	0.0143	0.010	mg/Kg wet	0.0200		71.4	70-130			
1,2,3-Trichloropropane	0.0192	0.0020	mg/Kg wet	0.0200		96.0	70-130			
1,2,4-Trimethylbenzene	0.0198	0.0020	mg/Kg wet	0.0200		98.9	70-130			
1,3,5-Trimethylbenzene	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130			
<b>Vinyl Chloride</b>	0.0133	0.010	mg/Kg wet	0.0200		<b>66.3</b>	* 70-130			L-04
m+p Xylene	0.0399	0.0040	mg/Kg wet	0.0400		99.7	70-130			
o-Xylene	0.0197	0.0020	mg/Kg wet	0.0200		98.7	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0488		mg/Kg wet	0.0500		97.5	70-130			
Surrogate: Toluene-d8	0.0476		mg/Kg wet	0.0500		95.2	70-130			
Surrogate: 4-Bromofluorobenzene	0.0485		mg/Kg wet	0.0500		96.9	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
<b>Batch B227113 - SW-846 5035</b>										
<b>LCS Dup (B227113-BSD1)</b>										
Prepared & Analyzed: 04/01/19										
Acetone	0.250	0.10	mg/Kg wet	0.200		125	40-160	6.89	20	†
tert-Amyl Methyl Ether (TAME)	0.0203	0.0010	mg/Kg wet	0.0200		102	70-130	3.30	20	
Benzene	0.0173	0.0020	mg/Kg wet	0.0200		86.4	70-130	4.69	20	
Bromobenzene	0.0205	0.0020	mg/Kg wet	0.0200		102	70-130	1.89	20	
Bromochloromethane	0.0191	0.0020	mg/Kg wet	0.0200		95.4	70-130	8.22	20	
Bromodichloromethane	0.0191	0.0020	mg/Kg wet	0.0200		95.6	70-130	2.76	20	
Bromoform	0.0240	0.0020	mg/Kg wet	0.0200		120	70-130	3.54	20	V-20
Bromomethane	0.0119	0.010	mg/Kg wet	0.0200		59.7	40-160	4.87	20	L-14, V-34 †
2-Butanone (MEK)	0.225	0.040	mg/Kg wet	0.200		112	40-160	1.42	20	†
n-Butylbenzene	0.0212	0.0020	mg/Kg wet	0.0200		106	70-130	0.577	20	
sec-Butylbenzene	0.0217	0.0020	mg/Kg wet	0.0200		109	70-130	0.702	20	
tert-Butylbenzene	0.0216	0.0020	mg/Kg wet	0.0200		108	70-130	1.75	20	
tert-Butyl Ethyl Ether (TBEE)	0.0194	0.0010	mg/Kg wet	0.0200		97.1	70-130	3.45	20	
Carbon Disulfide	0.0192	0.0060	mg/Kg wet	0.0200		96.2	70-130	7.49	20	
Carbon Tetrachloride	0.0191	0.0020	mg/Kg wet	0.0200		95.6	70-130	5.41	20	
Chlorobenzene	0.0207	0.0020	mg/Kg wet	0.0200		104	70-130	3.15	20	
Chlorodibromomethane	0.0215	0.0010	mg/Kg wet	0.0200		107	70-130	4.46	20	
Chloroethane	0.0194	0.010	mg/Kg wet	0.0200		97.2	70-130	6.31	20	
Chloroform	0.0173	0.0040	mg/Kg wet	0.0200		86.5	70-130	2.14	20	
Chloromethane	0.0118	0.010	mg/Kg wet	0.0200		58.9	40-160	2.75	20	L-14 †
2-Chlorotoluene	0.0206	0.0020	mg/Kg wet	0.0200		103	70-130	2.25	20	
4-Chlorotoluene	0.0210	0.0020	mg/Kg wet	0.0200		105	70-130	4.01	20	
1,2-Dibromo-3-chloropropane (DBCP)	0.0230	0.0020	mg/Kg wet	0.0200		115	70-130	3.64	20	
1,2-Dibromoethane (EDB)	0.0196	0.0010	mg/Kg wet	0.0200		97.8	70-130	3.66	20	
Dibromomethane	0.0190	0.0020	mg/Kg wet	0.0200		94.9	70-130	10.1	20	
1,2-Dichlorobenzene	0.0209	0.0020	mg/Kg wet	0.0200		105	70-130	0.867	20	
1,3-Dichlorobenzene	0.0217	0.0020	mg/Kg wet	0.0200		109	70-130	1.47	20	
1,4-Dichlorobenzene	0.0204	0.0020	mg/Kg wet	0.0200		102	70-130	1.74	20	
Dichlorodifluoromethane (Freon 12)	0.0106	0.010	mg/Kg wet	0.0200		52.8	40-160	1.12	20	L-14 †
1,1-Dichloroethane	0.0181	0.0020	mg/Kg wet	0.0200		90.4	70-130	4.56	20	
1,2-Dichloroethane	0.0185	0.0020	mg/Kg wet	0.0200		92.7	70-130	5.02	20	
1,1-Dichloroethylene	0.0176	0.0040	mg/Kg wet	0.0200		88.1	70-130	2.15	20	
cis-1,2-Dichloroethylene	0.0173	0.0020	mg/Kg wet	0.0200		86.7	70-130	0.439	20	
trans-1,2-Dichloroethylene	0.0179	0.0020	mg/Kg wet	0.0200		89.7	70-130	3.70	20	
1,2-Dichloropropane	0.0190	0.0020	mg/Kg wet	0.0200		95.2	70-130	5.50	20	
1,3-Dichloropropane	0.0181	0.0010	mg/Kg wet	0.0200		90.6	70-130	2.59	20	
2,2-Dichloropropane	0.0189	0.0020	mg/Kg wet	0.0200		94.6	70-130	2.72	20	
1,1-Dichloropropene	0.0179	0.0020	mg/Kg wet	0.0200		89.3	70-130	4.20	20	
cis-1,3-Dichloropropene	0.0197	0.0010	mg/Kg wet	0.0200		98.5	70-130	3.67	20	
trans-1,3-Dichloropropene	0.0205	0.0010	mg/Kg wet	0.0200		103	70-130	4.28	20	
Diethyl Ether	0.0184	0.010	mg/Kg wet	0.0200		91.8	70-130	5.17	20	
Diisopropyl Ether (DIPE)	0.0184	0.0010	mg/Kg wet	0.0200		92.0	70-130	3.22	20	
1,4-Dioxane	0.195	0.10	mg/Kg wet	0.200		97.6	40-160	0.510	20	V-16 †
Ethylbenzene	0.0201	0.0020	mg/Kg wet	0.0200		100	70-130	0.950	20	
Hexachlorobutadiene	0.0228	0.0020	mg/Kg wet	0.0200		114	70-130	1.23	20	
2-Hexanone (MBK)	0.215	0.020	mg/Kg wet	0.200		108	40-160	3.68	20	†
Isopropylbenzene (Cumene)	0.0215	0.0020	mg/Kg wet	0.0200		108	70-130	2.65	20	
p-Isopropyltoluene (p-Cymene)	0.0215	0.0020	mg/Kg wet	0.0200		108	70-130	0.652	20	
Methyl tert-Butyl Ether (MTBE)	0.0260	0.0040	mg/Kg wet	0.0200		130	70-130	7.70	20	V-20
Methylene Chloride	0.0194	0.010	mg/Kg wet	0.0200		96.8	70-130	3.30	20	
4-Methyl-2-pentanone (MIBK)	0.204	0.020	mg/Kg wet	0.200		102	40-160	5.04	20	†
Naphthalene	0.0204	0.0040	mg/Kg wet	0.0200		102	70-130	0.625	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
<b>Batch B227113 - SW-846 5035</b>										
<b>LCS Dup (B227113-BSD1)</b>										
Prepared & Analyzed: 04/01/19										
n-Propylbenzene	0.0209	0.0020	mg/Kg wet	0.0200		105	70-130	2.53	20	
Styrene	0.0204	0.0020	mg/Kg wet	0.0200		102	70-130	2.48	20	
1,1,1,2-Tetrachloroethane	0.0216	0.0020	mg/Kg wet	0.0200		108	70-130	3.22	20	
1,1,2,2-Tetrachloroethane	0.0227	0.0010	mg/Kg wet	0.0200		113	70-130	8.01	20	
Tetrachloroethylene	0.0192	0.0020	mg/Kg wet	0.0200		96.1	70-130	1.20	20	
Tetrahydrofuran	0.0163	0.010	mg/Kg wet	0.0200		81.7	70-130	16.1	20	
Toluene	0.0185	0.0020	mg/Kg wet	0.0200		92.7	70-130	3.37	20	
1,2,3-Trichlorobenzene	0.0214	0.0020	mg/Kg wet	0.0200		107	70-130	0.875	20	
1,2,4-Trichlorobenzene	0.0216	0.0020	mg/Kg wet	0.0200		108	70-130	3.96	20	
1,1,1-Trichloroethane	0.0182	0.0020	mg/Kg wet	0.0200		91.1	70-130	1.43	20	
1,1,2-Trichloroethane	0.0195	0.0020	mg/Kg wet	0.0200		97.7	70-130	3.57	20	
Trichloroethylene	0.0182	0.0020	mg/Kg wet	0.0200		91.2	70-130	6.16	20	
Trichlorofluoromethane (Freon 11)	0.0147	0.010	mg/Kg wet	0.0200		73.6	70-130	3.05	20	
1,2,3-Trichloropropane	0.0196	0.0020	mg/Kg wet	0.0200		98.2	70-130	2.32	20	
1,2,4-Trimethylbenzene	0.0199	0.0020	mg/Kg wet	0.0200		99.7	70-130	0.866	20	
1,3,5-Trimethylbenzene	0.0208	0.0020	mg/Kg wet	0.0200		104	70-130	2.96	20	
<b>Vinyl Chloride</b>	0.0137	0.010	mg/Kg wet	0.0200		<b>68.3</b> *	70-130	2.99	20	L-04
m+p Xylene	0.0402	0.0040	mg/Kg wet	0.0400		101	70-130	0.834	20	
o-Xylene	0.0205	0.0020	mg/Kg wet	0.0200		102	70-130	3.72	20	
Surrogate: 1,2-Dichloroethane-d4	0.0485		mg/Kg wet	0.0500		97.0	70-130			
Surrogate: Toluene-d8	0.0488		mg/Kg wet	0.0500		97.6	70-130			
Surrogate: 4-Bromofluorobenzene	0.0472		mg/Kg wet	0.0500		94.5	70-130			

**Batch B227135 - SW-846 5035**

**Blank (B227135-BLK1)**

Prepared & Analyzed: 04/01/19

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							
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							

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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
<b>Batch B227135 - SW-846 5035</b>										
<b>Blank (B227135-BLK1)</b>										
Prepared & Analyzed: 04/01/19										
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							
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							
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							L-04
m+p Xylene	ND	0.0040	mg/Kg wet							
o-Xylene	ND	0.0020	mg/Kg wet							
Surrogate: 1,2-Dichloroethane-d4	0.0470		mg/Kg wet	0.0500		93.9	70-130			
Surrogate: Toluene-d8	0.0480		mg/Kg wet	0.0500		95.9	70-130			
Surrogate: 4-Bromofluorobenzene	0.0479		mg/Kg wet	0.0500		95.8	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
<b>Batch B227135 - SW-846 5035</b>										
<b>LCS (B227135-BS1)</b>										
Prepared & Analyzed: 04/01/19										
Acetone	0.200	0.10	mg/Kg wet	0.200		99.9	40-160			†
tert-Amyl Methyl Ether (TAME)	0.0187	0.0010	mg/Kg wet	0.0200		93.3	70-130			
Benzene	0.0164	0.0020	mg/Kg wet	0.0200		82.0	70-130			
Bromobenzene	0.0199	0.0020	mg/Kg wet	0.0200		99.5	70-130			
Bromochloromethane	0.0173	0.0020	mg/Kg wet	0.0200		86.4	70-130			
Bromodichloromethane	0.0188	0.0020	mg/Kg wet	0.0200		94.2	70-130			
Bromoform	0.0228	0.0020	mg/Kg wet	0.0200		114	70-130			V-20
Bromomethane	0.0106	0.010	mg/Kg wet	0.0200		52.8	40-160			L-14, V-34 †
2-Butanone (MEK)	0.198	0.040	mg/Kg wet	0.200		98.9	40-160			†
n-Butylbenzene	0.0204	0.0020	mg/Kg wet	0.0200		102	70-130			
sec-Butylbenzene	0.0211	0.0020	mg/Kg wet	0.0200		106	70-130			
tert-Butylbenzene	0.0210	0.0020	mg/Kg wet	0.0200		105	70-130			
tert-Butyl Ethyl Ether (TBEE)	0.0182	0.0010	mg/Kg wet	0.0200		91.1	70-130			
Carbon Disulfide	0.0182	0.0060	mg/Kg wet	0.0200		91.2	70-130			
Carbon Tetrachloride	0.0178	0.0020	mg/Kg wet	0.0200		89.0	70-130			
Chlorobenzene	0.0204	0.0020	mg/Kg wet	0.0200		102	70-130			
Chlorodibromomethane	0.0213	0.0010	mg/Kg wet	0.0200		106	70-130			
Chloroethane	0.0173	0.010	mg/Kg wet	0.0200		86.4	70-130			
Chloroform	0.0166	0.0040	mg/Kg wet	0.0200		83.0	70-130			
Chloromethane	0.0109	0.010	mg/Kg wet	0.0200		54.7	40-160			L-14 †
2-Chlorotoluene	0.0205	0.0020	mg/Kg wet	0.0200		103	70-130			
4-Chlorotoluene	0.0200	0.0020	mg/Kg wet	0.0200		100	70-130			
1,2-Dibromo-3-chloropropane (DBCP)	0.0230	0.0020	mg/Kg wet	0.0200		115	70-130			
1,2-Dibromoethane (EDB)	0.0189	0.0010	mg/Kg wet	0.0200		94.3	70-130			
Dibromomethane	0.0178	0.0020	mg/Kg wet	0.0200		89.2	70-130			
1,2-Dichlorobenzene	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130			
1,3-Dichlorobenzene	0.0211	0.0020	mg/Kg wet	0.0200		105	70-130			
1,4-Dichlorobenzene	0.0196	0.0020	mg/Kg wet	0.0200		98.2	70-130			
Dichlorodifluoromethane (Freon 12)	0.00943	0.010	mg/Kg wet	0.0200		47.2	40-160			L-14 †
1,1-Dichloroethane	0.0171	0.0020	mg/Kg wet	0.0200		85.4	70-130			
1,2-Dichloroethane	0.0179	0.0020	mg/Kg wet	0.0200		89.6	70-130			
1,1-Dichloroethylene	0.0166	0.0040	mg/Kg wet	0.0200		83.0	70-130			
cis-1,2-Dichloroethylene	0.0169	0.0020	mg/Kg wet	0.0200		84.4	70-130			
trans-1,2-Dichloroethylene	0.0170	0.0020	mg/Kg wet	0.0200		85.0	70-130			
1,2-Dichloropropane	0.0179	0.0020	mg/Kg wet	0.0200		89.6	70-130			
1,3-Dichloropropane	0.0181	0.0010	mg/Kg wet	0.0200		90.6	70-130			
2,2-Dichloropropane	0.0177	0.0020	mg/Kg wet	0.0200		88.6	70-130			
1,1-Dichloropropene	0.0164	0.0020	mg/Kg wet	0.0200		82.1	70-130			
cis-1,3-Dichloropropene	0.0188	0.0010	mg/Kg wet	0.0200		94.0	70-130			
trans-1,3-Dichloropropene	0.0195	0.0010	mg/Kg wet	0.0200		97.3	70-130			
Diethyl Ether	0.0169	0.010	mg/Kg wet	0.0200		84.5	70-130			
Diisopropyl Ether (DIPE)	0.0174	0.0010	mg/Kg wet	0.0200		87.0	70-130			
1,4-Dioxane	0.208	0.10	mg/Kg wet	0.200		104	40-160			V-16 †
Ethylbenzene	0.0199	0.0020	mg/Kg wet	0.0200		99.3	70-130			
Hexachlorobutadiene	0.0222	0.0020	mg/Kg wet	0.0200		111	70-130			
2-Hexanone (MBK)	0.199	0.020	mg/Kg wet	0.200		99.5	40-160			†
Isopropylbenzene (Cumene)	0.0213	0.0020	mg/Kg wet	0.0200		107	70-130			
p-Isopropyltoluene (p-Cymene)	0.0210	0.0020	mg/Kg wet	0.0200		105	70-130			
Methyl tert-Butyl Ether (MTBE)	0.0228	0.0040	mg/Kg wet	0.0200		114	70-130			V-20
Methylene Chloride	0.0189	0.010	mg/Kg wet	0.0200		94.4	70-130			
4-Methyl-2-pentanone (MIBK)	0.195	0.020	mg/Kg wet	0.200		97.4	40-160			†
Naphthalene	0.0197	0.0040	mg/Kg wet	0.0200		98.4	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
<b>Batch B227135 - SW-846 5035</b>										
<b>LCS (B227135-BS1)</b>										
Prepared & Analyzed: 04/01/19										
n-Propylbenzene	0.0207	0.0020	mg/Kg wet	0.0200		104	70-130			
Styrene	0.0198	0.0020	mg/Kg wet	0.0200		98.9	70-130			
1,1,1,2-Tetrachloroethane	0.0208	0.0020	mg/Kg wet	0.0200		104	70-130			
1,1,2,2-Tetrachloroethane	0.0213	0.0010	mg/Kg wet	0.0200		106	70-130			
Tetrachloroethylene	0.0195	0.0020	mg/Kg wet	0.0200		97.4	70-130			
Tetrahydrofuran	0.0180	0.010	mg/Kg wet	0.0200		89.8	70-130			
Toluene	0.0186	0.0020	mg/Kg wet	0.0200		93.2	70-130			
1,2,3-Trichlorobenzene	0.0205	0.0020	mg/Kg wet	0.0200		102	70-130			
1,2,4-Trichlorobenzene	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130			
1,1,1-Trichloroethane	0.0175	0.0020	mg/Kg wet	0.0200		87.7	70-130			
1,1,2-Trichloroethane	0.0199	0.0020	mg/Kg wet	0.0200		99.5	70-130			
Trichloroethylene	0.0179	0.0020	mg/Kg wet	0.0200		89.7	70-130			
Trichlorofluoromethane (Freon 11)	0.0144	0.010	mg/Kg wet	0.0200		72.0	70-130			
1,2,3-Trichloropropane	0.0183	0.0020	mg/Kg wet	0.0200		91.5	70-130			
1,2,4-Trimethylbenzene	0.0194	0.0020	mg/Kg wet	0.0200		97.2	70-130			
1,3,5-Trimethylbenzene	0.0203	0.0020	mg/Kg wet	0.0200		102	70-130			
<b>Vinyl Chloride</b>	0.0126	0.010	mg/Kg wet	0.0200		<b>63.0</b> *	70-130			L-04
m+p Xylene	0.0398	0.0040	mg/Kg wet	0.0400		99.6	70-130			
o-Xylene	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0472		mg/Kg wet	0.0500		94.5	70-130			
Surrogate: Toluene-d8	0.0489		mg/Kg wet	0.0500		97.9	70-130			
Surrogate: 4-Bromofluorobenzene	0.0485		mg/Kg wet	0.0500		97.1	70-130			
<b>LCS Dup (B227135-BS1)</b>										
Prepared & Analyzed: 04/01/19										
Acetone	0.203	0.10	mg/Kg wet	0.200		101	40-160	1.51	20	†
tert-Amyl Methyl Ether (TAME)	0.0200	0.0010	mg/Kg wet	0.0200		99.9	70-130	6.83	20	
Benzene	0.0173	0.0020	mg/Kg wet	0.0200		86.3	70-130	5.18	20	
Bromobenzene	0.0203	0.0020	mg/Kg wet	0.0200		101	70-130	1.97	20	
Bromochloromethane	0.0188	0.0020	mg/Kg wet	0.0200		93.8	70-130	8.26	20	
Bromodichloromethane	0.0199	0.0020	mg/Kg wet	0.0200		99.3	70-130	5.26	20	
Bromoform	0.0247	0.0020	mg/Kg wet	0.0200		124	70-130	8.19	20	V-20
Bromomethane	0.0116	0.010	mg/Kg wet	0.0200		57.9	40-160	9.27	20	L-14, V-34 †
2-Butanone (MEK)	0.202	0.040	mg/Kg wet	0.200		101	40-160	2.24	20	†
n-Butylbenzene	0.0222	0.0020	mg/Kg wet	0.0200		111	70-130	8.20	20	
sec-Butylbenzene	0.0226	0.0020	mg/Kg wet	0.0200		113	70-130	7.09	20	
tert-Butylbenzene	0.0224	0.0020	mg/Kg wet	0.0200		112	70-130	6.80	20	
tert-Butyl Ethyl Ether (TBEE)	0.0195	0.0010	mg/Kg wet	0.0200		97.5	70-130	6.77	20	
Carbon Disulfide	0.0190	0.0060	mg/Kg wet	0.0200		94.9	70-130	3.96	20	
Carbon Tetrachloride	0.0188	0.0020	mg/Kg wet	0.0200		93.8	70-130	5.27	20	
Chlorobenzene	0.0214	0.0020	mg/Kg wet	0.0200		107	70-130	4.58	20	
Chlorodibromomethane	0.0223	0.0010	mg/Kg wet	0.0200		111	70-130	4.73	20	
Chloroethane	0.0183	0.010	mg/Kg wet	0.0200		91.7	70-130	6.00	20	
Chloroform	0.0175	0.0040	mg/Kg wet	0.0200		87.7	70-130	5.52	20	
Chloromethane	0.0114	0.010	mg/Kg wet	0.0200		56.9	40-160	3.87	20	L-14 †
2-Chlorotoluene	0.0216	0.0020	mg/Kg wet	0.0200		108	70-130	4.96	20	
4-Chlorotoluene	0.0213	0.0020	mg/Kg wet	0.0200		106	70-130	6.19	20	
1,2-Dibromo-3-chloropropane (DBCP)	0.0255	0.0020	mg/Kg wet	0.0200		127	70-130	10.2	20	
1,2-Dibromoethane (EDB)	0.0206	0.0010	mg/Kg wet	0.0200		103	70-130	8.68	20	
Dibromomethane	0.0191	0.0020	mg/Kg wet	0.0200		95.6	70-130	6.99	20	
1,2-Dichlorobenzene	0.0221	0.0020	mg/Kg wet	0.0200		111	70-130	8.98	20	
1,3-Dichlorobenzene	0.0224	0.0020	mg/Kg wet	0.0200		112	70-130	6.33	20	
1,4-Dichlorobenzene	0.0216	0.0020	mg/Kg wet	0.0200		108	70-130	9.61	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
<b>Batch B227135 - SW-846 5035</b>										
<b>LCS Dup (B227135-BSD1)</b>										
Prepared & Analyzed: 04/01/19										
Dichlorodifluoromethane (Freon 12)	0.00957	0.010	mg/Kg wet	0.0200		47.9	40-160	1.52	20	L-14 †
1,1-Dichloroethane	0.0180	0.0020	mg/Kg wet	0.0200		89.9	70-130	5.14	20	
1,2-Dichloroethane	0.0192	0.0020	mg/Kg wet	0.0200		95.8	70-130	6.59	20	
1,1-Dichloroethylene	0.0175	0.0040	mg/Kg wet	0.0200		87.4	70-130	5.17	20	
cis-1,2-Dichloroethylene	0.0179	0.0020	mg/Kg wet	0.0200		89.5	70-130	5.81	20	
trans-1,2-Dichloroethylene	0.0178	0.0020	mg/Kg wet	0.0200		89.0	70-130	4.60	20	
1,2-Dichloropropane	0.0193	0.0020	mg/Kg wet	0.0200		96.6	70-130	7.42	20	
1,3-Dichloropropane	0.0191	0.0010	mg/Kg wet	0.0200		95.7	70-130	5.43	20	
2,2-Dichloropropane	0.0182	0.0020	mg/Kg wet	0.0200		91.1	70-130	2.84	20	
1,1-Dichloropropene	0.0173	0.0020	mg/Kg wet	0.0200		86.5	70-130	5.19	20	
cis-1,3-Dichloropropene	0.0198	0.0010	mg/Kg wet	0.0200		99.1	70-130	5.26	20	
trans-1,3-Dichloropropene	0.0206	0.0010	mg/Kg wet	0.0200		103	70-130	5.78	20	
Diethyl Ether	0.0179	0.010	mg/Kg wet	0.0200		89.7	70-130	6.05	20	
Diisopropyl Ether (DIPE)	0.0183	0.0010	mg/Kg wet	0.0200		91.6	70-130	5.25	20	
1,4-Dioxane	0.209	0.10	mg/Kg wet	0.200		105	40-160	0.495	20	V-16 †
Ethylbenzene	0.0208	0.0020	mg/Kg wet	0.0200		104	70-130	4.67	20	
Hexachlorobutadiene	0.0245	0.0020	mg/Kg wet	0.0200		122	70-130	9.69	20	
2-Hexanone (MBK)	0.212	0.020	mg/Kg wet	0.200		106	40-160	6.50	20	†
Isopropylbenzene (Cumene)	0.0223	0.0020	mg/Kg wet	0.0200		112	70-130	4.56	20	
p-Isopropyltoluene (p-Cymene)	0.0224	0.0020	mg/Kg wet	0.0200		112	70-130	6.40	20	
Methyl tert-Butyl Ether (MTBE)	0.0258	0.0040	mg/Kg wet	0.0200		129	70-130	12.5	20	V-20
Methylene Chloride	0.0192	0.010	mg/Kg wet	0.0200		96.1	70-130	1.81	20	
4-Methyl-2-pentanone (MIBK)	0.209	0.020	mg/Kg wet	0.200		104	40-160	7.05	20	†
Naphthalene	0.0212	0.0040	mg/Kg wet	0.0200		106	70-130	7.39	20	
n-Propylbenzene	0.0214	0.0020	mg/Kg wet	0.0200		107	70-130	3.25	20	
Styrene	0.0208	0.0020	mg/Kg wet	0.0200		104	70-130	4.98	20	
1,1,1,2-Tetrachloroethane	0.0225	0.0020	mg/Kg wet	0.0200		112	70-130	7.88	20	
1,1,2,2-Tetrachloroethane	0.0228	0.0010	mg/Kg wet	0.0200		114	70-130	6.66	20	
Tetrachloroethylene	0.0205	0.0020	mg/Kg wet	0.0200		103	70-130	5.16	20	
Tetrahydrofuran	0.0183	0.010	mg/Kg wet	0.0200		91.3	70-130	1.62	20	
Toluene	0.0194	0.0020	mg/Kg wet	0.0200		96.9	70-130	3.92	20	
1,2,3-Trichlorobenzene	0.0217	0.0020	mg/Kg wet	0.0200		109	70-130	5.89	20	
1,2,4-Trichlorobenzene	0.0222	0.0020	mg/Kg wet	0.0200		111	70-130	9.26	20	
1,1,1-Trichloroethane	0.0183	0.0020	mg/Kg wet	0.0200		91.4	70-130	4.14	20	
1,1,2-Trichloroethane	0.0198	0.0020	mg/Kg wet	0.0200		99.1	70-130	0.413	20	
Trichloroethylene	0.0190	0.0020	mg/Kg wet	0.0200		94.9	70-130	5.65	20	
Trichlorofluoromethane (Freon 11)	0.0141	0.010	mg/Kg wet	0.0200		70.4	70-130	2.28	20	
1,2,3-Trichloropropane	0.0197	0.0020	mg/Kg wet	0.0200		98.6	70-130	7.40	20	
1,2,4-Trimethylbenzene	0.0210	0.0020	mg/Kg wet	0.0200		105	70-130	7.82	20	
1,3,5-Trimethylbenzene	0.0215	0.0020	mg/Kg wet	0.0200		107	70-130	5.65	20	
<b>Vinyl Chloride</b>	0.0137	0.010	mg/Kg wet	0.0200		<b>68.3</b> *	70-130	8.03	20	L-04
m+p Xylene	0.0420	0.0040	mg/Kg wet	0.0400		105	70-130	5.31	20	
o-Xylene	0.0211	0.0020	mg/Kg wet	0.0200		105	70-130	4.50	20	
Surrogate: 1,2-Dichloroethane-d4	0.0471		mg/Kg wet	0.0500		94.2	70-130			
Surrogate: Toluene-d8	0.0484		mg/Kg wet	0.0500		96.7	70-130			
Surrogate: 4-Bromofluorobenzene	0.0478		mg/Kg wet	0.0500		95.6	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
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**Batch B227222 - SW-846 3546**

**Blank (B227222-BLK1)**

Prepared: 04/02/19 Analyzed: 04/03/19

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							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							
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							
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							
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							
2,4-Dinitrophenol	ND	0.66	mg/Kg wet							
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							
1,2-Diphenylhydrazine/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							V-05
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							

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
<b>Batch B227222 - SW-846 3546</b>										
<b>Blank (B227222-BLK1)</b>										
Prepared: 04/02/19 Analyzed: 04/03/19										
Phenol	ND	0.34	mg/Kg wet							
Pyrene	ND	0.17	mg/Kg wet							
Pyridine	ND	0.34	mg/Kg wet							
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	6.15		mg/Kg wet	6.67		92.2	30-130			
Surrogate: Phenol-d6	6.54		mg/Kg wet	6.67		98.0	30-130			
Surrogate: Nitrobenzene-d5	3.20		mg/Kg wet	3.33		95.9	30-130			
Surrogate: 2-Fluorobiphenyl	3.32		mg/Kg wet	3.33		99.6	30-130			
Surrogate: 2,4,6-Tribromophenol	7.60		mg/Kg wet	6.67		114	30-130			
Surrogate: p-Terphenyl-d14	4.21		mg/Kg wet	3.33		126	30-130			
<b>LCS (B227222-BS1)</b>										
Prepared: 04/02/19 Analyzed: 04/03/19										
Acenaphthene	1.10	0.17	mg/Kg wet	1.67		65.9	40-140			
Acenaphthylene	1.13	0.17	mg/Kg wet	1.67		67.8	40-140			
Acetophenone	1.07	0.34	mg/Kg wet	1.67		64.2	40-140			
<b>Aniline</b>	0.607	0.34	mg/Kg wet	1.67		<b>36.4</b>	<b>*</b> 40-140			L-07, V-34
Anthracene	1.24	0.17	mg/Kg wet	1.67		74.2	40-140			
Benzo(a)anthracene	1.18	0.17	mg/Kg wet	1.67		70.6	40-140			
Benzo(a)pyrene	1.28	0.17	mg/Kg wet	1.67		76.6	40-140			
Benzo(b)fluoranthene	1.19	0.17	mg/Kg wet	1.67		71.6	40-140			
Benzo(g,h,i)perylene	1.35	0.17	mg/Kg wet	1.67		80.9	40-140			
Benzo(k)fluoranthene	1.23	0.17	mg/Kg wet	1.67		74.0	40-140			
Bis(2-chloroethoxy)methane	1.33	0.34	mg/Kg wet	1.67		79.6	40-140			
Bis(2-chloroethyl)ether	1.17	0.34	mg/Kg wet	1.67		70.0	40-140			
Bis(2-chloroisopropyl)ether	1.37	0.34	mg/Kg wet	1.67		82.4	40-140			
Bis(2-Ethylhexyl)phthalate	1.46	0.34	mg/Kg wet	1.67		87.5	40-140			
4-Bromophenylphenylether	1.22	0.34	mg/Kg wet	1.67		73.3	40-140			
Butylbenzylphthalate	1.42	0.34	mg/Kg wet	1.67		85.5	40-140			
4-Chloroaniline	0.614	0.66	mg/Kg wet	1.67		36.9	15-140			V-34 †
2-Chloronaphthalene	1.03	0.34	mg/Kg wet	1.67		61.6	40-140			
2-Chlorophenol	1.12	0.34	mg/Kg wet	1.67		67.0	30-130			
Chrysene	1.20	0.17	mg/Kg wet	1.67		71.8	40-140			
Dibenz(a,h)anthracene	1.27	0.17	mg/Kg wet	1.67		76.0	40-140			
Dibenzofuran	1.17	0.34	mg/Kg wet	1.67		69.9	40-140			
Di-n-butylphthalate	1.34	0.34	mg/Kg wet	1.67		80.2	40-140			
1,2-Dichlorobenzene	0.939	0.34	mg/Kg wet	1.67		56.3	40-140			
1,3-Dichlorobenzene	0.910	0.34	mg/Kg wet	1.67		54.6	40-140			
1,4-Dichlorobenzene	0.922	0.34	mg/Kg wet	1.67		55.3	40-140			
3,3-Dichlorobenzidine	0.818	0.17	mg/Kg wet	1.67		49.1	40-140			V-34
2,4-Dichlorophenol	1.10	0.34	mg/Kg wet	1.67		65.7	30-130			
Diethylphthalate	1.28	0.34	mg/Kg wet	1.67		77.0	40-140			
2,4-Dimethylphenol	1.15	0.34	mg/Kg wet	1.67		69.3	30-130			
Dimethylphthalate	1.25	0.34	mg/Kg wet	1.67		74.8	40-140			
2,4-Dinitrophenol	0.720	0.66	mg/Kg wet	1.67		43.2	15-140			†
2,4-Dinitrotoluene	1.20	0.34	mg/Kg wet	1.67		71.7	40-140			
2,6-Dinitrotoluene	1.25	0.34	mg/Kg wet	1.67		75.0	40-140			
Di-n-octylphthalate	1.44	0.34	mg/Kg wet	1.67		86.2	40-140			
1,2-Diphenylhydrazine/Azobenzene	1.32	0.34	mg/Kg wet	1.67		79.0	40-140			
Fluoranthene	1.17	0.17	mg/Kg wet	1.67		70.3	40-140			
Fluorene	1.20	0.17	mg/Kg wet	1.67		71.8	40-140			

**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 B227222 - SW-846 3546**

**LCS (B227222-BS1)**

Prepared: 04/02/19 Analyzed: 04/03/19

Hexachlorobenzene	1.16	0.34	mg/Kg wet	1.67		69.7	40-140			
Hexachlorobutadiene	0.986	0.34	mg/Kg wet	1.67		59.2	40-140			
Hexachloroethane	0.986	0.34	mg/Kg wet	1.67		59.1	40-140			
Indeno(1,2,3-cd)pyrene	1.29	0.17	mg/Kg wet	1.67		77.6	40-140			
Isophorone	1.18	0.34	mg/Kg wet	1.67		71.1	40-140			
2-Methylnaphthalene	1.13	0.17	mg/Kg wet	1.67		68.1	40-140			
2-Methylphenol	0.884	0.34	mg/Kg wet	1.67		53.0	30-130			V-05
3/4-Methylphenol	1.10	0.34	mg/Kg wet	1.67		66.3	30-130			
Naphthalene	1.03	0.17	mg/Kg wet	1.67		62.1	40-140			
Nitrobenzene	1.06	0.34	mg/Kg wet	1.67		63.3	40-140			
2-Nitrophenol	1.13	0.34	mg/Kg wet	1.67		67.7	30-130			
4-Nitrophenol	1.18	0.66	mg/Kg wet	1.67		70.8	15-140			†
Pentachlorophenol	1.09	0.34	mg/Kg wet	1.67		65.3	30-130			
Phenanthrene	1.22	0.17	mg/Kg wet	1.67		73.3	40-140			
Phenol	1.11	0.34	mg/Kg wet	1.67		66.7	15-140			†
Pyrene	1.32	0.17	mg/Kg wet	1.67		79.2	40-140			
Pyridine	0.677	0.34	mg/Kg wet	1.67		40.6	30-140			†
1,2,4-Trichlorobenzene	0.997	0.34	mg/Kg wet	1.67		59.8	40-140			
2,4,5-Trichlorophenol	1.17	0.34	mg/Kg wet	1.67		70.0	30-130			
2,4,6-Trichlorophenol	1.22	0.34	mg/Kg wet	1.67		73.1	30-130			
Surrogate: 2-Fluorophenol	4.31		mg/Kg wet	6.67		64.6	30-130			
Surrogate: Phenol-d6	4.70		mg/Kg wet	6.67		70.4	30-130			
Surrogate: Nitrobenzene-d5	2.31		mg/Kg wet	3.33		69.2	30-130			
Surrogate: 2-Fluorobiphenyl	2.42		mg/Kg wet	3.33		72.7	30-130			
Surrogate: 2,4,6-Tribromophenol	5.26		mg/Kg wet	6.67		78.8	30-130			
Surrogate: p-Terphenyl-d14	2.88		mg/Kg wet	3.33		86.5	30-130			

**LCS Dup (B227222-BS1)**

Prepared: 04/02/19 Analyzed: 04/03/19

Acenaphthene	1.03	0.17	mg/Kg wet	1.67		61.7	40-140	6.68	30	
Acenaphthylene	1.06	0.17	mg/Kg wet	1.67		63.4	40-140	6.68	30	
Acetophenone	1.01	0.34	mg/Kg wet	1.67		60.8	40-140	5.50	30	
Aniline	0.760	0.34	mg/Kg wet	1.67		45.6	40-140	22.4	30	V-34
Anthracene	1.14	0.17	mg/Kg wet	1.67		68.4	40-140	8.05	30	
Benzo(a)anthracene	1.10	0.17	mg/Kg wet	1.67		66.1	40-140	6.61	30	
Benzo(a)pyrene	1.21	0.17	mg/Kg wet	1.67		72.4	40-140	5.64	30	
Benzo(b)fluoranthene	1.14	0.17	mg/Kg wet	1.67		68.3	40-140	4.66	30	
Benzo(g,h,i)perylene	1.26	0.17	mg/Kg wet	1.67		75.7	40-140	6.61	30	
Benzo(k)fluoranthene	1.16	0.17	mg/Kg wet	1.67		69.5	40-140	6.27	30	
Bis(2-chloroethoxy)methane	1.21	0.34	mg/Kg wet	1.67		72.8	40-140	8.95	30	
Bis(2-chloroethyl)ether	1.06	0.34	mg/Kg wet	1.67		63.5	40-140	9.68	30	
Bis(2-chloroisopropyl)ether	1.25	0.34	mg/Kg wet	1.67		74.8	40-140	9.62	30	
Bis(2-Ethylhexyl)phthalate	1.32	0.34	mg/Kg wet	1.67		79.2	40-140	9.89	30	
4-Bromophenylphenylether	1.14	0.34	mg/Kg wet	1.67		68.5	40-140	6.74	30	
Butylbenzylphthalate	1.30	0.34	mg/Kg wet	1.67		78.0	40-140	9.15	30	
4-Chloroaniline	0.779	0.66	mg/Kg wet	1.67		46.7	15-140	23.6	30	V-34 †
2-Chloronaphthalene	0.973	0.34	mg/Kg wet	1.67		58.4	40-140	5.34	30	
2-Chlorophenol	1.05	0.34	mg/Kg wet	1.67		63.2	30-130	5.81	30	
Chrysene	1.13	0.17	mg/Kg wet	1.67		67.9	40-140	5.55	30	
Dibenz(a,h)anthracene	1.19	0.17	mg/Kg wet	1.67		71.5	40-140	6.05	30	
Dibenzofuran	1.09	0.34	mg/Kg wet	1.67		65.7	40-140	6.28	30	
Di-n-butylphthalate	1.22	0.34	mg/Kg wet	1.67		73.3	40-140	8.91	30	
1,2-Dichlorobenzene	0.887	0.34	mg/Kg wet	1.67		53.2	40-140	5.66	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
<b>Batch B227222 - SW-846 3546</b>										
<b>LCS Dup (B227222-BSD1)</b>										
					Prepared: 04/02/19 Analyzed: 04/03/19					
1,3-Dichlorobenzene	0.851	0.34	mg/Kg wet	1.67		51.1	40-140	6.70	30	
1,4-Dichlorobenzene	0.851	0.34	mg/Kg wet	1.67		51.0	40-140	8.01	30	
3,3-Dichlorobenzidine	0.935	0.17	mg/Kg wet	1.67		56.1	40-140	13.3	30	V-34
2,4-Dichlorophenol	1.03	0.34	mg/Kg wet	1.67		61.6	30-130	6.47	30	
Diethylphthalate	1.20	0.34	mg/Kg wet	1.67		72.2	40-140	6.43	30	
2,4-Dimethylphenol	1.06	0.34	mg/Kg wet	1.67		63.5	30-130	8.64	30	
Dimethylphthalate	1.17	0.34	mg/Kg wet	1.67		70.3	40-140	6.28	30	
2,4-Dinitrophenol	0.670	0.66	mg/Kg wet	1.67		40.2	15-140	7.24	30	†
2,4-Dinitrotoluene	1.14	0.34	mg/Kg wet	1.67		68.7	40-140	4.36	30	
2,6-Dinitrotoluene	1.17	0.34	mg/Kg wet	1.67		69.9	40-140	6.93	30	
Di-n-octylphthalate	1.30	0.34	mg/Kg wet	1.67		77.8	40-140	10.3	30	
1,2-Diphenylhydrazine/Azobenzene	1.19	0.34	mg/Kg wet	1.67		71.1	40-140	10.5	30	
Fluoranthene	1.11	0.17	mg/Kg wet	1.67		66.6	40-140	5.41	30	
Fluorene	1.13	0.17	mg/Kg wet	1.67		67.9	40-140	5.67	30	
Hexachlorobenzene	1.10	0.34	mg/Kg wet	1.67		65.9	40-140	5.69	30	
Hexachlorobutadiene	0.925	0.34	mg/Kg wet	1.67		55.5	40-140	6.42	30	
Hexachloroethane	0.922	0.34	mg/Kg wet	1.67		55.3	40-140	6.71	30	
Indeno(1,2,3-cd)pyrene	1.21	0.17	mg/Kg wet	1.67		72.5	40-140	6.72	30	
Isophorone	1.09	0.34	mg/Kg wet	1.67		65.7	40-140	7.96	30	
2-Methylnaphthalene	1.07	0.17	mg/Kg wet	1.67		64.2	40-140	5.84	30	
2-Methylphenol	0.840	0.34	mg/Kg wet	1.67		50.4	30-130	5.14	30	V-05
3/4-Methylphenol	1.03	0.34	mg/Kg wet	1.67		62.0	30-130	6.64	30	
Naphthalene	0.981	0.17	mg/Kg wet	1.67		58.8	40-140	5.36	30	
Nitrobenzene	0.976	0.34	mg/Kg wet	1.67		58.5	40-140	7.88	30	
2-Nitrophenol	1.06	0.34	mg/Kg wet	1.67		63.7	30-130	6.12	30	
4-Nitrophenol	1.09	0.66	mg/Kg wet	1.67		65.6	15-140	7.69	30	†
Pentachlorophenol	1.01	0.34	mg/Kg wet	1.67		60.7	30-130	7.17	30	
Phenanthrene	1.14	0.17	mg/Kg wet	1.67		68.7	40-140	6.54	30	
Phenol	1.03	0.34	mg/Kg wet	1.67		62.1	15-140	7.15	30	†
Pyrene	1.20	0.17	mg/Kg wet	1.67		72.3	40-140	9.21	30	
Pyridine	0.609	0.34	mg/Kg wet	1.67		36.6	30-140	10.6	30	†
1,2,4-Trichlorobenzene	0.946	0.34	mg/Kg wet	1.67		56.8	40-140	5.28	30	
2,4,5-Trichlorophenol	1.10	0.34	mg/Kg wet	1.67		66.3	30-130	5.55	30	
2,4,6-Trichlorophenol	1.15	0.34	mg/Kg wet	1.67		68.7	30-130	6.20	30	
Surrogate: 2-Fluorophenol	4.09		mg/Kg wet	6.67		61.4	30-130			
Surrogate: Phenol-d6	4.33		mg/Kg wet	6.67		64.9	30-130			
Surrogate: Nitrobenzene-d5	2.11		mg/Kg wet	3.33		63.4	30-130			
Surrogate: 2-Fluorobiphenyl	2.23		mg/Kg wet	3.33		66.9	30-130			
Surrogate: 2,4,6-Tribromophenol	5.07		mg/Kg wet	6.67		76.0	30-130			
Surrogate: p-Terphenyl-d14	2.60		mg/Kg wet	3.33		77.9	30-130			
<b>Matrix Spike (B227222-MS1)</b>										
					Source: 19C1572-02 Prepared: 04/02/19 Analyzed: 04/03/19					
Acenaphthene	1.41	0.18	mg/Kg dry	1.73	ND	81.3	40-140			
Acenaphthylene	1.45	0.18	mg/Kg dry	1.73	ND	83.8	40-140			
Acetophenone	1.37	0.35	mg/Kg dry	1.73	ND	79.0	40-140			
Aniline	0.952	0.35	mg/Kg dry	1.73	ND	55.0	40-140			V-34
Anthracene	1.56	0.18	mg/Kg dry	1.73	ND	90.1	40-140			
Benzo(a)anthracene	1.50	0.18	mg/Kg dry	1.73	ND	86.7	40-140			
Benzo(a)pyrene	1.63	0.18	mg/Kg dry	1.73	ND	94.1	40-140			
Benzo(b)fluoranthene	1.60	0.18	mg/Kg dry	1.73	ND	92.6	40-140			
Benzo(g,h,i)perylene	1.71	0.18	mg/Kg dry	1.73	ND	98.8	40-140			
Benzo(k)fluoranthene	1.62	0.18	mg/Kg dry	1.73	ND	93.5	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
<b>Batch B227222 - SW-846 3546</b>										
<b>Matrix Spike (B227222-MS1)</b>	<b>Source: 19C1572-02</b>			Prepared: 04/02/19 Analyzed: 04/03/19						
Bis(2-chloroethoxy)methane	1.70	0.35	mg/Kg dry	1.73	ND	98.0	40-140			
Bis(2-chloroethyl)ether	1.39	0.35	mg/Kg dry	1.73	ND	80.5	40-140			
Bis(2-chloroisopropyl)ether	1.64	0.35	mg/Kg dry	1.73	ND	94.6	40-140			
Bis(2-Ethylhexyl)phthalate	1.90	0.35	mg/Kg dry	1.73	ND	110	40-140			
4-Bromophenylphenylether	1.49	0.35	mg/Kg dry	1.73	ND	85.8	40-140			
Butylbenzylphthalate	1.89	0.35	mg/Kg dry	1.73	ND	109	40-140			
4-Chloroaniline	1.06	0.69	mg/Kg dry	1.73	ND	61.3	40-140			V-34
2-Chloronaphthalene	1.33	0.35	mg/Kg dry	1.73	ND	76.7	40-140			
2-Chlorophenol	1.35	0.35	mg/Kg dry	1.73	ND	77.8	30-130			
Chrysene	1.53	0.18	mg/Kg dry	1.73	ND	88.2	40-140			
Dibenz(a,h)anthracene	1.60	0.18	mg/Kg dry	1.73	ND	92.6	40-140			
Dibenzofuran	1.49	0.35	mg/Kg dry	1.73	ND	86.0	40-140			
Di-n-butylphthalate	1.69	0.35	mg/Kg dry	1.73	ND	97.5	40-140			
1,2-Dichlorobenzene	1.05	0.35	mg/Kg dry	1.73	ND	60.6	40-140			
1,3-Dichlorobenzene	0.978	0.35	mg/Kg dry	1.73	ND	56.5	40-140			
1,4-Dichlorobenzene	1.01	0.35	mg/Kg dry	1.73	ND	58.2	40-140			
3,3-Dichlorobenzidine	1.47	0.18	mg/Kg dry	1.73	ND	85.0	40-140			V-34
2,4-Dichlorophenol	1.34	0.35	mg/Kg dry	1.73	ND	77.4	30-130			
Diethylphthalate	1.64	0.35	mg/Kg dry	1.73	ND	94.9	40-140			
2,4-Dimethylphenol	1.36	0.35	mg/Kg dry	1.73	ND	78.6	30-130			
Dimethylphthalate	1.58	0.35	mg/Kg dry	1.73	ND	91.2	40-140			
2,4-Dinitrophenol	0.961	0.69	mg/Kg dry	1.73	ND	55.5	30-130			
2,4-Dinitrotoluene	1.58	0.35	mg/Kg dry	1.73	ND	91.5	40-140			
2,6-Dinitrotoluene	1.60	0.35	mg/Kg dry	1.73	ND	92.2	40-140			
Di-n-octylphthalate	2.33	0.35	mg/Kg dry	1.73	ND	135	40-140			
1,2-Diphenylhydrazine/Azobenzene	1.60	0.35	mg/Kg dry	1.73	ND	92.4	40-140			
Fluoranthene	1.57	0.18	mg/Kg dry	1.73	ND	90.9	40-140			
Fluorene	1.54	0.18	mg/Kg dry	1.73	ND	88.7	40-140			
Hexachlorobenzene	1.43	0.35	mg/Kg dry	1.73	ND	82.7	40-140			
Hexachlorobutadiene	1.18	0.35	mg/Kg dry	1.73	ND	68.4	40-140			
Hexachloroethane	1.06	0.35	mg/Kg dry	1.73	ND	61.0	40-140			
Indeno(1,2,3-cd)pyrene	1.62	0.18	mg/Kg dry	1.73	ND	93.4	40-140			
Isophorone	1.53	0.35	mg/Kg dry	1.73	ND	88.3	40-140			
2-Methylnaphthalene	1.46	0.18	mg/Kg dry	1.73	ND	84.4	40-140			
2-Methylphenol	1.10	0.35	mg/Kg dry	1.73	ND	63.5	30-130			V-05
3/4-Methylphenol	1.38	0.35	mg/Kg dry	1.73	ND	79.5	30-130			
Naphthalene	1.33	0.18	mg/Kg dry	1.73	ND	77.1	40-140			
Nitrobenzene	1.36	0.35	mg/Kg dry	1.73	ND	78.4	40-140			
2-Nitrophenol	1.45	0.35	mg/Kg dry	1.73	ND	84.0	30-130			
4-Nitrophenol	1.71	0.69	mg/Kg dry	1.73	ND	98.6	30-130			
Pentachlorophenol	1.33	0.35	mg/Kg dry	1.73	ND	77.1	30-130			
Phenanthrene	1.56	0.18	mg/Kg dry	1.73	ND	90.1	40-140			
Phenol	1.41	0.35	mg/Kg dry	1.73	ND	81.5	30-130			
Pyrene	1.68	0.18	mg/Kg dry	1.73	ND	96.8	40-140			
1,2,4-Trichlorobenzene	1.26	0.35	mg/Kg dry	1.73	ND	72.8	40-140			
2,4,5-Trichlorophenol	1.49	0.35	mg/Kg dry	1.73	ND	86.0	30-130			
2,4,6-Trichlorophenol	1.55	0.35	mg/Kg dry	1.73	ND	89.4	30-130			
Surrogate: 2-Fluorophenol	4.98		mg/Kg dry	6.92		71.9	30-130			
Surrogate: Phenol-d6	5.80		mg/Kg dry	6.92		83.8	30-130			
Surrogate: Nitrobenzene-d5	2.88		mg/Kg dry	3.46		83.1	30-130			
Surrogate: 2-Fluorobiphenyl	3.06		mg/Kg dry	3.46		88.3	30-130			
Surrogate: 2,4,6-Tribromophenol	6.71		mg/Kg dry	6.92		96.9	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
<b>Batch B227222 - SW-846 3546</b>										
<b>Matrix Spike (B227222-MS1)</b>		<b>Source: 19C1572-02</b>			Prepared: 04/02/19 Analyzed: 04/03/19					
Surrogate: p-Terphenyl-d14	3.56		mg/Kg dry	3.46		103	30-130			
<b>Matrix Spike Dup (B227222-MSD1)</b>		<b>Source: 19C1572-02</b>			Prepared: 04/02/19 Analyzed: 04/03/19					
Acenaphthene	1.41	0.18	mg/Kg dry	1.76	ND	80.2	40-140	0.349	30	
Acenaphthylene	1.42	0.18	mg/Kg dry	1.76	ND	80.6	40-140	2.23	30	
Acetophenone	1.35	0.36	mg/Kg dry	1.76	ND	76.9	40-140	0.981	30	
Aniline	0.897	0.36	mg/Kg dry	1.76	ND	51.0	40-140	5.95	30	V-34
Anthracene	1.51	0.18	mg/Kg dry	1.76	ND	85.9	40-140	3.16	30	
Benzo(a)anthracene	1.48	0.18	mg/Kg dry	1.76	ND	84.1	40-140	1.34	30	
Benzo(a)pyrene	1.59	0.18	mg/Kg dry	1.76	ND	90.5	40-140	2.35	30	
Benzo(b)fluoranthene	1.55	0.18	mg/Kg dry	1.76	ND	88.2	40-140	3.23	30	
Benzo(g,h,i)perylene	1.62	0.18	mg/Kg dry	1.76	ND	91.9	40-140	5.56	30	
Benzo(k)fluoranthene	1.58	0.18	mg/Kg dry	1.76	ND	89.9	40-140	2.25	30	
Bis(2-chloroethoxy)methane	1.65	0.36	mg/Kg dry	1.76	ND	93.9	40-140	2.59	30	
Bis(2-chloroethyl)ether	1.41	0.36	mg/Kg dry	1.76	ND	80.1	40-140	1.09	30	
Bis(2-chloroisopropyl)ether	1.67	0.36	mg/Kg dry	1.76	ND	95.0	40-140	2.00	30	
Bis(2-Ethylhexyl)phthalate	1.87	0.36	mg/Kg dry	1.76	ND	106	40-140	1.51	30	
4-Bromophenylphenylether	1.47	0.36	mg/Kg dry	1.76	ND	83.4	40-140	1.29	30	
Butylbenzylphthalate	1.86	0.36	mg/Kg dry	1.76	ND	106	40-140	1.66	30	
4-Chloroaniline	0.978	0.70	mg/Kg dry	1.76	ND	55.6	40-140	8.13	30	V-34
2-Chloronaphthalene	1.28	0.36	mg/Kg dry	1.76	ND	72.8	40-140	3.66	30	
2-Chlorophenol	1.36	0.36	mg/Kg dry	1.76	ND	77.1	30-130	0.707	30	
Chrysene	1.51	0.18	mg/Kg dry	1.76	ND	85.6	40-140	1.26	30	
Dibenz(a,h)anthracene	1.50	0.18	mg/Kg dry	1.76	ND	85.3	40-140	6.48	30	
Dibenzofuran	1.47	0.36	mg/Kg dry	1.76	ND	83.3	40-140	1.55	30	
Di-n-butylphthalate	1.64	0.36	mg/Kg dry	1.76	ND	93.2	40-140	2.90	30	
1,2-Dichlorobenzene	1.12	0.36	mg/Kg dry	1.76	ND	63.8	40-140	6.65	30	
1,3-Dichlorobenzene	1.07	0.36	mg/Kg dry	1.76	ND	60.6	40-140	8.67	30	
1,4-Dichlorobenzene	1.09	0.36	mg/Kg dry	1.76	ND	61.8	40-140	7.57	30	
3,3-Dichlorobenzidine	1.40	0.18	mg/Kg dry	1.76	ND	79.6	40-140	4.88	30	V-34
2,4-Dichlorophenol	1.34	0.36	mg/Kg dry	1.76	ND	76.3	30-130	0.179	30	
Diethylphthalate	1.60	0.36	mg/Kg dry	1.76	ND	90.7	40-140	2.80	30	
2,4-Dimethylphenol	1.32	0.36	mg/Kg dry	1.76	ND	75.2	30-130	2.79	30	
Dimethylphthalate	1.55	0.36	mg/Kg dry	1.76	ND	88.1	40-140	1.89	30	
2,4-Dinitrophenol	0.961	0.70	mg/Kg dry	1.76	ND	54.6	30-130	0.0384	30	
2,4-Dinitrotoluene	1.56	0.36	mg/Kg dry	1.76	ND	88.5	40-140	1.61	30	
2,6-Dinitrotoluene	1.57	0.36	mg/Kg dry	1.76	ND	89.0	40-140	1.85	30	
Di-n-octylphthalate	2.19	0.36	mg/Kg dry	1.76	ND	124	40-140	6.52	30	
1,2-Diphenylhydrazine/Azobenzene	1.57	0.36	mg/Kg dry	1.76	ND	89.3	40-140	1.75	30	
Fluoranthene	1.55	0.18	mg/Kg dry	1.76	ND	88.0	40-140	1.63	30	
Fluorene	1.52	0.18	mg/Kg dry	1.76	ND	86.1	40-140	1.29	30	
Hexachlorobenzene	1.40	0.36	mg/Kg dry	1.76	ND	79.7	40-140	2.06	30	
Hexachlorobutadiene	1.19	0.36	mg/Kg dry	1.76	ND	67.4	40-140	0.223	30	
Hexachloroethane	1.13	0.36	mg/Kg dry	1.76	ND	64.0	40-140	6.56	30	
Indeno(1,2,3-cd)pyrene	1.52	0.18	mg/Kg dry	1.76	ND	86.6	40-140	5.94	30	
Isophorone	1.52	0.36	mg/Kg dry	1.76	ND	86.4	40-140	0.607	30	
2-Methylnaphthalene	1.45	0.18	mg/Kg dry	1.76	ND	82.1	40-140	1.08	30	
2-Methylphenol	1.08	0.36	mg/Kg dry	1.76	ND	61.2	30-130	1.92	30	V-05
3/4-Methylphenol	1.34	0.36	mg/Kg dry	1.76	ND	75.9	30-130	3.05	30	
Naphthalene	1.32	0.18	mg/Kg dry	1.76	ND	74.8	40-140	1.39	30	
Nitrobenzene	1.33	0.36	mg/Kg dry	1.76	ND	75.7	40-140	1.92	30	
2-Nitrophenol	1.44	0.36	mg/Kg dry	1.76	ND	81.7	30-130	1.14	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
<b>Batch B227222 - SW-846 3546</b>										
<b>Matrix Spike Dup (B227222-MSD1)</b>	<b>Source: 19C1572-02</b>			Prepared: 04/02/19 Analyzed: 04/03/19						
4-Nitrophenol	1.62	0.70	mg/Kg dry	1.76	ND	92.1	30-130	5.22	30	
Pentachlorophenol	1.32	0.36	mg/Kg dry	1.76	ND	74.8	30-130	1.34	30	
Phenanthrene	1.52	0.18	mg/Kg dry	1.76	ND	86.4	40-140	2.58	30	
Phenol	1.39	0.36	mg/Kg dry	1.76	ND	79.0	30-130	1.46	30	
Pyrene	1.67	0.18	mg/Kg dry	1.76	ND	95.1	40-140	0.157	30	
1,2,4-Trichlorobenzene	1.25	0.36	mg/Kg dry	1.76	ND	70.9	40-140	0.952	30	
2,4,5-Trichlorophenol	1.47	0.36	mg/Kg dry	1.76	ND	83.4	30-130	1.39	30	
2,4,6-Trichlorophenol	1.53	0.36	mg/Kg dry	1.76	ND	87.1	30-130	0.948	30	
Surrogate: 2-Fluorophenol	5.09		mg/Kg dry	7.04		72.3	30-130			
Surrogate: Phenol-d6	5.72		mg/Kg dry	7.04		81.3	30-130			
Surrogate: Nitrobenzene-d5	2.85		mg/Kg dry	3.52		80.9	30-130			
Surrogate: 2-Fluorobiphenyl	2.99		mg/Kg dry	3.52		85.1	30-130			
Surrogate: 2,4,6-Tribromophenol	6.58		mg/Kg dry	7.04		93.5	30-130			
Surrogate: p-Terphenyl-d14	3.53		mg/Kg dry	3.52		100	30-130			

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**QUALITY CONTROL**

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B227240 - SW-846 3540C**

**Blank (B227240-BLK1)**

Prepared: 04/02/19 Analyzed: 04/04/19

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	0.209		mg/Kg wet	0.200		105	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.207		mg/Kg wet	0.200		103	30-150			
Surrogate: Tetrachloro-m-xylene	0.218		mg/Kg wet	0.200		109	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.220		mg/Kg wet	0.200		110	30-150			

**LCS (B227240-BS1)**

Prepared: 04/02/19 Analyzed: 04/04/19

Aroclor-1016	0.18	0.020	mg/Kg wet	0.200		91.4	40-140			
Aroclor-1016 [2C]	0.16	0.020	mg/Kg wet	0.200		80.2	40-140			
Aroclor-1260	0.18	0.020	mg/Kg wet	0.200		87.9	40-140			
Aroclor-1260 [2C]	0.16	0.020	mg/Kg wet	0.200		79.0	40-140			
Surrogate: Decachlorobiphenyl	0.191		mg/Kg wet	0.200		95.5	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.188		mg/Kg wet	0.200		93.9	30-150			
Surrogate: Tetrachloro-m-xylene	0.192		mg/Kg wet	0.200		96.0	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.190		mg/Kg wet	0.200		94.8	30-150			

**LCS Dup (B227240-BSD1)**

Prepared: 04/02/19 Analyzed: 04/04/19

Aroclor-1016	0.20	0.020	mg/Kg wet	0.200		99.7	40-140	8.74	30	
Aroclor-1016 [2C]	0.18	0.020	mg/Kg wet	0.200		88.1	40-140	9.34	30	
Aroclor-1260	0.19	0.020	mg/Kg wet	0.200		94.4	40-140	7.06	30	
Aroclor-1260 [2C]	0.17	0.020	mg/Kg wet	0.200		85.2	40-140	7.53	30	
Surrogate: Decachlorobiphenyl	0.205		mg/Kg wet	0.200		102	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.202		mg/Kg wet	0.200		101	30-150			
Surrogate: Tetrachloro-m-xylene	0.208		mg/Kg wet	0.200		104	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.208		mg/Kg wet	0.200		104	30-150			

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**QUALITY CONTROL**

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B227240 - SW-846 3540C**

**Matrix Spike (B227240-MS1)**

**Source: 19C1572-01**

Prepared: 04/02/19 Analyzed: 04/04/19

Aroclor-1016	0.21	0.082	mg/Kg dry	0.206	ND	101	40-140			
Aroclor-1016 [2C]	0.19	0.082	mg/Kg dry	0.206	ND	92.5	40-140			
Aroclor-1260	0.20	0.082	mg/Kg dry	0.206	ND	94.7	40-140			
Aroclor-1260 [2C]	0.18	0.082	mg/Kg dry	0.206	ND	85.0	40-140			
Surrogate: Decachlorobiphenyl	0.196		mg/Kg dry	0.206		95.1	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.182		mg/Kg dry	0.206		88.3	30-150			
Surrogate: Tetrachloro-m-xylene	0.201		mg/Kg dry	0.206		97.7	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.196		mg/Kg dry	0.206		95.1	30-150			

**Matrix Spike Dup (B227240-MSD1)**

**Source: 19C1572-01**

Prepared: 04/02/19 Analyzed: 04/04/19

Aroclor-1016	0.22	0.079	mg/Kg dry	0.196	ND	114	40-140	6.50	50	
Aroclor-1016 [2C]	0.19	0.079	mg/Kg dry	0.196	ND	98.8	40-140	1.67	50	
Aroclor-1260	0.19	0.079	mg/Kg dry	0.196	ND	97.8	40-140	1.72	50	
Aroclor-1260 [2C]	0.17	0.079	mg/Kg dry	0.196	ND	88.4	40-140	0.925	50	
Surrogate: Decachlorobiphenyl	0.194		mg/Kg dry	0.196		98.6	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.181		mg/Kg dry	0.196		92.1	30-150			
Surrogate: Tetrachloro-m-xylene	0.207		mg/Kg dry	0.196		105	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.203		mg/Kg dry	0.196		103	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
<b>Batch B227221 - SW-846 3546</b>										
<b>Blank (B227221-BLK1)</b>										
					Prepared: 04/02/19 Analyzed: 04/03/19					
TPH (C9-C36)	ND	8.3	mg/Kg wet							
Surrogate: 2-Fluorobiphenyl	1.65		mg/Kg wet	3.33		49.6	40-140			
<b>LCS (B227221-BS1)</b>										
					Prepared: 04/02/19 Analyzed: 04/03/19					
TPH (C9-C36)	24.6	8.3	mg/Kg wet	33.3		73.8	40-140			
Surrogate: 2-Fluorobiphenyl	2.68		mg/Kg wet	3.33		80.5	40-140			
<b>LCS Dup (B227221-BSD1)</b>										
					Prepared: 04/02/19 Analyzed: 04/03/19					
TPH (C9-C36)	25.8	8.3	mg/Kg wet	33.3		77.3	40-140	4.63	30	
Surrogate: 2-Fluorobiphenyl	2.83		mg/Kg wet	3.33		85.0	40-140			
<b>Matrix Spike (B227221-MS1)</b>										
			<b>Source: 19C1572-01</b>		Prepared: 04/02/19 Analyzed: 04/04/19					
TPH (C9-C36)	29.7	8.4	mg/Kg dry	33.8	6.28	69.3	40-140			
Surrogate: 2-Fluorobiphenyl	2.75		mg/Kg dry	3.38		81.3	40-140			
<b>Matrix Spike Dup (B227221-MSD1)</b>										
			<b>Source: 19C1572-01</b>		Prepared: 04/02/19 Analyzed: 04/04/19					
TPH (C9-C36)	28.2	8.6	mg/Kg dry	34.4	6.28	63.7	40-140	5.31	30	
Surrogate: 2-Fluorobiphenyl	2.69		mg/Kg dry	3.44		78.2	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
<b>Batch B227094 - SW-846 7471</b>										
<b>Blank (B227094-BLK1)</b> Prepared: 04/02/19 Analyzed: 04/03/19										
Mercury	ND	0.025	mg/Kg wet							
<b>LCS (B227094-BS1)</b> Prepared: 04/02/19 Analyzed: 04/03/19										
Mercury	2.63	0.37	mg/Kg wet	3.71		70.8	65-135			
<b>LCS Dup (B227094-BSD1)</b> Prepared: 04/02/19 Analyzed: 04/03/19										
Mercury	3.19	0.37	mg/Kg wet	3.71		86.0	65-135	19.3	30	
<b>Batch B227367 - SW-846 3050B</b>										
<b>Blank (B227367-BLK1)</b> Prepared: 04/03/19 Analyzed: 04/04/19										
Antimony	ND	1.7	mg/Kg wet							
Arsenic	ND	1.7	mg/Kg wet							
Barium	ND	1.7	mg/Kg wet							
Beryllium	ND	0.17	mg/Kg wet							
Cadmium	ND	0.17	mg/Kg wet							
Chromium	ND	0.33	mg/Kg wet							
Lead	ND	0.50	mg/Kg wet							
Nickel	ND	0.33	mg/Kg wet							
Selenium	ND	3.3	mg/Kg wet							
Silver	ND	0.33	mg/Kg wet							
Thallium	ND	1.7	mg/Kg wet							
Vanadium	ND	0.67	mg/Kg wet							
Zinc	ND	0.67	mg/Kg wet							
<b>LCS (B227367-BS1)</b> Prepared: 04/03/19 Analyzed: 04/04/19										
Antimony	64.2	4.8	mg/Kg wet	89.6		71.6	3.3-196.4			
Arsenic	200	4.8	mg/Kg wet	202		99.1	82.7-117.3			
Barium	260	4.8	mg/Kg wet	270		96.2	82.6-117.8			
Beryllium	90.8	0.48	mg/Kg wet	96.8		93.8	83.4-116.7			
Cadmium	128	0.48	mg/Kg wet	141		91.0	83-117			
Chromium	159	0.96	mg/Kg wet	167		95.4	81.4-118			
Lead	70.9	1.4	mg/Kg wet	73.8		96.0	82.9-117.1			
Nickel	85.7	0.96	mg/Kg wet	89.4		95.8	82.9-117.5			
Selenium	50.0	9.6	mg/Kg wet	49.9		100	79.2-120.6			
Silver	72.1	0.96	mg/Kg wet	71.1		101	79.7-120.1			
Thallium	59.2	4.8	mg/Kg wet	58.5		101	80.7-119.5			
Vanadium	52.7	1.9	mg/Kg wet	58.2		90.6	79-121			
Zinc	246	1.9	mg/Kg wet	264		93.2	80.7-119.3			
<b>LCS Dup (B227367-BSD1)</b> Prepared: 04/03/19 Analyzed: 04/04/19										
Antimony	60.6	4.9	mg/Kg wet	89.6		67.7	3.3-196.4	5.72	30	
Arsenic	183	4.9	mg/Kg wet	202		90.4	82.7-117.3	9.17	30	
Barium	240	4.9	mg/Kg wet	270		89.0	82.6-117.8	7.82	30	
Beryllium	85.0	0.49	mg/Kg wet	96.8		87.8	83.4-116.7	6.53	30	
Cadmium	125	0.49	mg/Kg wet	141		88.7	83-117	2.48	30	
Chromium	150	0.97	mg/Kg wet	167		89.6	81.4-118	6.23	30	
Lead	65.4	1.5	mg/Kg wet	73.8		88.6	82.9-117.1	8.08	30	
Nickel	82.6	0.97	mg/Kg wet	89.4		92.4	82.9-117.5	3.57	30	
Selenium	46.8	9.7	mg/Kg wet	49.9		93.8	79.2-120.6	6.57	30	
Silver	66.3	0.97	mg/Kg wet	71.1		93.2	79.7-120.1	8.46	30	
Thallium	56.0	4.9	mg/Kg wet	58.5		95.6	80.7-119.5	5.66	30	
Vanadium	48.9	1.9	mg/Kg wet	58.2		84.1	79-121	7.49	30	
Zinc	232	1.9	mg/Kg wet	264		88.0	80.7-119.3	5.71	30	

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

**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 B227367 - SW-846 3050B**

**Duplicate (B227367-DUP1)**

**Source: 19C1572-06**

Prepared: 04/03/19 Analyzed: 04/04/19

Antimony	ND	1.8	mg/Kg dry		ND			NC	35	
Arsenic	5.81	1.8	mg/Kg dry		5.00			14.9	35	
Barium	22.7	1.8	mg/Kg dry		20.9			8.09	35	
Beryllium	0.242	0.18	mg/Kg dry		0.252			4.07	35	
Cadmium	0.195	0.18	mg/Kg dry		ND			NC	35	
Chromium	9.31	0.35	mg/Kg dry		9.05			2.80	35	
Lead	4.65	0.53	mg/Kg dry		3.89			17.7	35	
Nickel	7.38	0.35	mg/Kg dry		7.14			3.33	35	
Selenium	ND	3.5	mg/Kg dry		ND			NC	35	
Silver	ND	0.35	mg/Kg dry		ND			NC	35	
Thallium	ND	1.8	mg/Kg dry		ND			NC	35	
Vanadium	12.6	0.71	mg/Kg dry		12.4			2.10	35	
Zinc	17.1	0.71	mg/Kg dry		16.6			2.58	35	

**MRL Check (B227367-MRL1)**

Prepared: 04/03/19 Analyzed: 04/04/19

Lead	0.492	0.48	mg/Kg wet	0.482		102		80-120		
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**Matrix Spike (B227367-MS1)**

**Source: 19C1572-06**

Prepared: 04/03/19 Analyzed: 04/04/19

<b>Antimony</b>	7.26	1.7	mg/Kg dry	17.2	ND	<b>42.2</b>	*	75-125		MS-07
Arsenic	20.8	1.7	mg/Kg dry	17.2	5.00	91.9		75-125		
Barium	39.9	1.7	mg/Kg dry	17.2	20.9	110		75-125		
Beryllium	15.8	0.17	mg/Kg dry	17.2	0.252	90.6		75-125		
Cadmium	15.8	0.17	mg/Kg dry	17.2	0.151	91.2		75-125		
Chromium	25.8	0.34	mg/Kg dry	17.2	9.05	97.3		75-125		
Lead	19.5	0.52	mg/Kg dry	17.2	3.89	90.6		75-125		
Nickel	24.2	0.34	mg/Kg dry	17.2	7.14	99.4		75-125		
Selenium	19.5	3.4	mg/Kg dry	17.2	ND	113		75-125		
Silver	16.7	0.34	mg/Kg dry	17.2	0.306	95.4		75-125		
Thallium	16.4	1.7	mg/Kg dry	17.2	ND	95.1		75-125		
Vanadium	30.1	0.69	mg/Kg dry	17.2	12.4	103		75-125		
Zinc	49.7	0.69	mg/Kg dry	34.4	16.6	96.2		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
<b>Batch B227022 - SW-846 9014</b>										
<b>Blank (B227022-BLK1)</b>				Prepared: 03/30/19 Analyzed: 03/31/19						
Reactive Cyanide	ND	0.40	mg/Kg							
<b>LCS (B227022-BS1)</b>				Prepared: 03/30/19 Analyzed: 03/31/19						
Reactive Cyanide	9.7	0.40	mg/Kg	10.0		96.9	83.6-111			
<b>Batch B227024 - SW-846 9030A</b>										
<b>Blank (B227024-BLK1)</b>				Prepared: 03/30/19 Analyzed: 03/31/19						
Reactive Sulfide	ND	2.0	mg/L							
<b>LCS (B227024-BS1)</b>				Prepared: 03/30/19 Analyzed: 03/31/19						
Reactive Sulfide	12	2.0	mg/L	14.8		83.8	54.9-121			
<b>Batch B227052 - SW-846 9045C</b>										
<b>LCS (B227052-BS1)</b>				Prepared & Analyzed: 03/30/19						
pH	6.03		pH Units	6.00		101	90-110			
<b>LCS (B227052-BS2)</b>				Prepared & Analyzed: 03/30/19						
pH	6.01		pH Units	6.00		100	90-110			
<b>Duplicate (B227052-DUP1)</b>		<b>Source: 19C1572-08</b>			Prepared & Analyzed: 03/30/19					
pH	6.2		pH Units		6.4			2.53	5	H-03
<b>Batch B227054 - SM21-22 2510B Modified</b>										
<b>Blank (B227054-BLK1)</b>				Prepared & Analyzed: 03/31/19						
Specific conductance	ND	2.0	µmhos/cm							
<b>LCS (B227054-BS1)</b>				Prepared & Analyzed: 03/31/19						
Specific conductance	190		µmhos/cm	192		99.3	90-110			
<b>Batch B227087 - SM21-22 2510B Modified</b>										
<b>Blank (B227087-BLK1)</b>				Prepared & Analyzed: 04/01/19						
Specific conductance	ND	2.0	µmhos/cm							
<b>LCS (B227087-BS1)</b>				Prepared & Analyzed: 04/01/19						
Specific conductance	200		µmhos/cm	192		102	90-110			

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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
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**Batch B227087 - SM21-22 2510B Modified**

<b>Duplicate (B227087-DUP1)</b>		<b>Source: 19C1572-06</b>		Prepared & Analyzed: 04/01/19						
Specific conductance	5.0	2.0	µmhos/cm		4.7			5.36	21	

**Batch B227324 - % Solids**

<b>Duplicate (B227324-DUP7)</b>		<b>Source: 19C1572-04</b>		Prepared: 04/03/19 Analyzed: 04/04/19						
% Solids	94.9		% Wt		94.8			0.0636	20	



**IDENTIFICATION SUMMARY  
FOR SINGLE COMPONENT ANALYTES**

LCS

*SW-846 8082A*

Lab Sample ID:           B227240-BS1                                Date(s) Analyzed:           04/04/2019                     04/04/2019          

Instrument ID (1):           ECD5                                                Instrument ID (2):           ECD5          

GC Column (1):                                      ID:                                      (mm)                      GC Column (2):                                      ID:                                      (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.18	
	2	0.000	-0.030	0.030	0.16	11.8
Aroclor-1260	1	0.000	-0.030	0.030	0.18	
	2	0.000	-0.030	0.030	0.16	11.8

**IDENTIFICATION SUMMARY  
FOR SINGLE COMPONENT ANALYTES**

LCS Dup

*SW-846 8082A*

Lab Sample ID:                   B227240-BSD1                                        Date(s) Analyzed:           04/04/2019                     04/04/2019          

Instrument ID (1):                   ECD5                                        Instrument ID (2):                   ECD5                  

GC Column (1):                      ID:                      (mm)                      GC Column (2):                      ID:                      (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.20	
	2	0.000	-0.030	0.030	0.18	10.5
Aroclor-1260	1	0.000	-0.030	0.030	0.19	
	2	0.000	-0.030	0.030	0.17	11.1

**IDENTIFICATION SUMMARY  
FOR SINGLE COMPONENT ANALYTES**

**Matrix Spike**

*SW-846 8082A*

Lab Sample ID:                   B227240-MS1                                        Date(s) Analyzed:           04/04/2019                     04/04/2019          

Instrument ID (1):                   ECD5                                        Instrument ID (2):                   ECD5                  

GC Column (1):                      ID:                      (mm)                      GC Column (2):                      ID:                      (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.21	
	2	0.000	-0.030	0.030	0.19	10.0
Aroclor-1260	1	0.000	-0.030	0.030	0.20	
	2	0.000	-0.030	0.030	0.18	10.5

**IDENTIFICATION SUMMARY  
FOR SINGLE COMPONENT ANALYTES**

**Matrix Spike Dup**

*SW-846 8082A*

Lab Sample ID:                     B227240-MSD1                                          Date(s) Analyzed:           04/04/2019                     04/04/2019          

Instrument ID (1):                     ECD5                                          Instrument ID (2):                     ECD5                    

GC Column (1):                      ID:                      (mm)                      GC Column (2):                      ID:                      (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.22	
	2	0.000	-0.030	0.030	0.19	14.6
Aroclor-1260	1	0.000	-0.030	0.030	0.19	
	2	0.000	-0.030	0.030	0.17	11.1

**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.
H-03	Sample received after recommended holding time was exceeded.
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.
MS-07	Matrix spike recovery is outside of control limits. Analysis is in control based on laboratory fortified blank recovery. Possibility of sample matrix effects that lead to low bias for reported result or non-homogeneous sample aliquot cannot be eliminated.
O-32	A dilution was performed as part of the standard analytical procedure.
V-05	Continuing calibration verification (CCV) did not meet method specifications and was biased on the low side for this compound.
V-16	Response factor is less than method specified minimum acceptable value. Reduced precision and accuracy may be associated with reported result.
V-20	Continuing calibration verification (CCV) 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.

**CERTIFICATIONS**

**Certified Analyses included in this Report**

<b>Analyte</b>	<b>Certifications</b>
<b>SW-846 1030 in Soil</b>	
Ignitability	NY,NH,CT,NC,ME,VA
<b>SW-846 6010D in Soil</b>	
Antimony	CT,NH,NY,ME,VA,NC
Arsenic	CT,NH,NY,ME,VA,NC
Barium	CT,NH,NY,ME,VA,NC
Beryllium	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
Nickel	CT,NH,NY,ME,VA,NC
Selenium	CT,NH,NY,ME,VA,NC
Silver	CT,NH,NY,ME,VA,NC
Thallium	CT,NH,NY,ME,VA,NC
Vanadium	CT,NH,NY,ME,VA,NC
Zinc	CT,NH,NY,ME,VA,NC
<b>SW-846 7471B in Soil</b>	
Mercury	CT,NH,NY,NC,ME,VA
<b>SW-846 8082A in Soil</b>	
Aroclor-1016	CT,NH,NY,ME,NC,VA
Aroclor-1016 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1221	CT,NH,NY,ME,NC,VA
Aroclor-1221 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1232	CT,NH,NY,ME,NC,VA
Aroclor-1232 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1242	CT,NH,NY,ME,NC,VA
Aroclor-1242 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1248	CT,NH,NY,ME,NC,VA
Aroclor-1248 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1254	CT,NH,NY,ME,NC,VA
Aroclor-1254 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1260	CT,NH,NY,ME,NC,VA
Aroclor-1260 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1262	NY,NC,VA
Aroclor-1262 [2C]	NY,NC,VA
Aroclor-1268	NY,NC,VA
Aroclor-1268 [2C]	NY,NC,VA
<b>SW-846 8260C in Soil</b>	
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

## CERTIFICATIONS

## Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8260C in Soil</i>	
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
1,2-Dibromo-3-chloropropane (DBCP)	NY
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
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

**CERTIFICATIONS**

**Certified Analyses included in this Report**

Analyte	Certifications
<b>SW-846 8260C in Soil</b>	
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
<b>SW-846 8270D in Soil</b>	
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
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



**CERTIFICATIONS**

**Certified Analyses included in this Report**

Analyte	Certifications
<i>SW-846 8270D in Soil</i>	
1,2-Diphenylhydrazine/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
2,4,5-Trichlorophenol	CT,NY,NH
2,4,6-Trichlorophenol	CT,NY,NH

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

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2005	100033	03/1/2020
MA	Massachusetts DEP	M-MA100	06/30/2019
CT	Connecticut Department of Public Health	PH-0567	09/30/2019
NY	New York State Department of Health	10899 NELAP	04/1/2020
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2020
RI	Rhode Island Department of Health	LAO00112	12/30/2019
NC	North Carolina Div. of Water Quality	652	12/31/2019
NJ	New Jersey DEP	MA007 NELAP	06/30/2019
FL	Florida Department of Health	E871027 NELAP	06/30/2019
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2019
ME	State of Maine	2011028	06/9/2019
VA	Commonwealth of Virginia	460217	12/14/2019
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2019
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2019
NC-DW	North Carolina Department of Health	25703	07/31/2019

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Customer Name: **VORTEX**  
Address: **100N Washington St, Suite 302, Boston MA**  
Phone: **617-275-5407**  
Project Location: **River's Edge, MA**  
Project Number: **400417**  
Project Manager: **K. Sarson**  
Con-Test Quote Name/Number:  
Invoice Recipient: **K. Sarson**  
Sampled By: **K. Sarson**

7-Day  10-Day   
Due Date: **5-Day**   
1-Day  3-Day   
2-Day  4-Day   
Format: PDF  EXCEL   
Other: **EDD**  
CLP Like Data Pkg Required:   
Email To: **Ksarson@contesting.com**  
Fax To #:

Con-Test Work Order #	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	Composite	Grab	Matrix Code	Conc Code
1	V-107 (5-10)	3/27/19	1305	X		S	
2	V-108 (0-5)		1315				
3	V-109 (5-10)		1325				
4	V-110 (5-10)		1335				
5	V-111 (0-10)		1345				
6	V-112 (0-5)		1400				
7	V-113 (0-5)	3/28/19	1100				
8	V-114 (5-10)		1135				
9	V-115 (5-10)		1200				
10	V-116 (0-5)		1230				

Comments:

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: **1090**  
 Relinquished by: (signature) **[Signature]** Date/Time: **1090**  
 Relinquished by: (signature) **[Signature]** Date/Time: **1910**  
 Relinquished by: (signature) **[Signature]** Date/Time: **1646**  
 Relinquished by: (signature) **[Signature]** Date/Time: **[Blank]**  
 Relinquished by: (signature) **[Signature]** Date/Time: **[Blank]**

**Special Requirements**  
 MA MCP Required  
 MCP Certification Form Required  
 CT RCP Required  
 RCP Certification Form Required  
 MA State DW Required  
 PWSID #

**Project Entity**  
 Government  
 Federal  
 City  
 Municipality  
 21 J  
 Brownfield  
 MWRA  
 School  
 MBTA  
 WRIA  
 Chromatogram  
 AIHA-LAP, LLC  
 PCB ONLY  
 Soxhlet  
 Non Soxhlet

**con-test**  
ANALYTICAL LABORATORY  
www.contestlabs.com

NELAP and AIHA-LAP UIC Accredited

I Have Not Confirmed Sample Container Numbers With Lab Staff Before Relinquishing Over Samples \_\_\_\_\_



**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 Verte

Received By SL Date 3/29/19 Time 1040

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 # 3 Actual Temp - 4.2  
 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? F  
 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? F Who was notified? \_\_\_\_\_  
 Are there Short Holds? F Who was notified? M. V. M.

Is there enough Volume? T  
 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? N/A Acid \_\_\_\_\_ Base \_\_\_\_\_

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

**Comments:**

PH pres hold

## MADEP MCP Analytical Method Report Certification Form

Laboratory Name: Con-Test Analytical Laboratory	Project #: 19C1572
Project Location: Wayland, MA	RTN:

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]  
19C1572-01 thru 19C1572-10

Matrices: Soil

**CAM Protocol (check all that below)**

8260 VOC CAM II A (X)	7470/7471 Hg CAM III B (X)	MassDEP VPH CAM IV A ( )	8082 PCB CAM V A (X)	9014 Total Cyanide/PAC CAM VI A ( )	6860 Perchlorate CAM VIII B ( )
8270 SVOC CAM II B (X)	7010 Metals CAM III C ( )	MassDEP VPH CAM IV C ( )	8081 Pesticides CAM V B ( )	7196 Hex Cr CAM VI B ( )	MassDEP APH CAM IX A ( )
6010 Metals CAM III A (X)	6020 Metals CAM III D ( )	MassDEP EPH CAM IV B ( )	8151 Herbicides CAM V C ( )	8330 Explosives CAM VIII A ( )	TO-15 VOC CAM IX B ( )

**Affirmative response to Questions A through F is required for "Presumptive Certainty" status**

<b>A</b>	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?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>B</b>	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>C</b>	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>D</b>	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?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>E a</b>	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).	<input type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>E b</b>	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	<input type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>F</b>	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)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>

**A response to questions G, H and I below is required for "Presumptive Certainty" status**

<b>G</b>	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
----------	---	--

**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.**

<b>H</b>	Were all QC performance standards specified in the CAM protocol(s) achieved?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <sup>1</sup>
<b>I</b>	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>

<sup>1</sup>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: Lisa Worthington

Position: Project Manager

Printed Name: Lisa A. Worthington

Date: 04/05/19

May 15, 2019

Kristen Sarson  
Vertex Engineering - Boston  
100 North Washington St. Suite 302  
Boston, MA 02114

Project Location: Wayland, MA  
Client Job Number:  
Project Number: 46047  
Laboratory Work Order Number: 19E0566

Enclosed are results of analyses for samples received by the laboratory on May 9, 2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Jessica Hoffman". The signature is written in a cursive style with a long, sweeping tail on the letter "n".

Jessica L. Hoffman  
Project Manager

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

Vertex Engineering - Boston  
 100 North Washington St. Suite 302  
 Boston, MA 02114  
 ATTN: Kristen Sarson

REPORT DATE: 5/15/2019

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 46047

**ANALYTICAL SUMMARY**

WORK ORDER NUMBER: 19E0566

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

PROJECT LOCATION: Wayland, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
V-301 (2-4)	19E0566-01	Soil		SM 2540G SW-846 6010D	
V-302 (2-4)	19E0566-02	Soil		SM 2540G SW-846 6010D	
V-303 (2-4)	19E0566-03	Soil		SM 2540G SW-846 6010D	
V-304 (2-4)	19E0566-04	Soil		SM 2540G SW-846 6010D	
V-305 (2-4)	19E0566-05	Soil		SM 2540G SW-846 6010D	
V-306 (2-4)	19E0566-06	Soil		SM 2540G SW-846 6010D	
V-307 (2-4)	19E0566-07	Soil		SM 2540G SW-846 6010D	
V-308 (2-4)	19E0566-08	Soil		SM 2540G SW-846 6010D	
V-309 (0-2)	19E0566-09	Soil		SM 2540G SW-846 6010D	
V-310 (0-2)	19E0566-10	Soil		SM 2540G SW-846 6010D	
V-311 (0-2)	19E0566-11	Soil		SM 2540G SW-846 6010D	
V-312 (2-4)	19E0566-12	Soil		SM 2540G SW-846 6010D	
V-313 (2-4)	19E0566-13	Soil		SM 2540G SW-846 6010D	
V-314 (2-4)	19E0566-14	Soil		SM 2540G SW-846 6010D	

**CASE NARRATIVE SUMMARY**

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

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  
Technical Representative



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

Project Location: Wayland, MA

Sample Description:

Work Order: 19E0566

Date Received: 5/9/2019

Field Sample #: V-301 (2-4)

Sampled: 5/8/2019 09:40

Sample ID: 19E0566-01

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.7	mg/Kg dry	1		SW-846 6010D	5/13/19	5/15/19 2:07	EJB
Copper	13	0.34	mg/Kg dry	1		SW-846 6010D	5/13/19	5/15/19 2:07	EJB
Lead	5.0	0.52	mg/Kg dry	1		SW-846 6010D	5/13/19	5/15/19 2:07	EJB

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Project Location: Wayland, MA

Sample Description:

Work Order: 19E0566

Date Received: 5/9/2019

Field Sample #: V-301 (2-4)

Sampled: 5/8/2019 09:40

Sample ID: 19E0566-01

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	93.9		% Wt	1		SM 2540G	5/13/19	5/14/19 13:17	MJR

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Project Location: Wayland, MA

Sample Description:

Work Order: 19E0566

Date Received: 5/9/2019

Field Sample #: V-302 (2-4)

Sampled: 5/8/2019 09:50

Sample ID: 19E0566-02

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.8	mg/Kg dry	1		SW-846 6010D	5/13/19	5/15/19 2:14	EJB
Copper	22	0.36	mg/Kg dry	1		SW-846 6010D	5/13/19	5/15/19 2:14	EJB
Lead	31	0.54	mg/Kg dry	1		SW-846 6010D	5/13/19	5/15/19 2:14	EJB

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Project Location: Wayland, MA

Sample Description:

Work Order: 19E0566

Date Received: 5/9/2019

Field Sample #: V-302 (2-4)

Sampled: 5/8/2019 09:50

Sample ID: 19E0566-02

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	91.5		% Wt	1		SM 2540G	5/13/19	5/14/19 13:17	MJR

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19E0566

Date Received: 5/9/2019

Field Sample #: V-303 (2-4)

Sampled: 5/8/2019 10:00

Sample ID: 19E0566-03

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.8	mg/Kg dry	1		SW-846 6010D	5/13/19	5/15/19 2:20	EJB
Copper	45	0.36	mg/Kg dry	1		SW-846 6010D	5/13/19	5/15/19 2:20	EJB
Lead	28	0.54	mg/Kg dry	1		SW-846 6010D	5/13/19	5/15/19 2:20	EJB

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Project Location: Wayland, MA

Sample Description:

Work Order: 19E0566

Date Received: 5/9/2019

Field Sample #: V-303 (2-4)

Sampled: 5/8/2019 10:00

Sample ID: 19E0566-03

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	93.3		% Wt	1		SM 2540G	5/13/19	5/14/19 13:17	MJR

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19E0566

Date Received: 5/9/2019

Field Sample #: V-304 (2-4)

Sampled: 5/8/2019 10:10

Sample ID: 19E0566-04

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.7	mg/Kg dry	1		SW-846 6010D	5/13/19	5/15/19 2:27	EJB
Copper	13	0.34	mg/Kg dry	1		SW-846 6010D	5/13/19	5/15/19 2:27	EJB
Lead	12	0.51	mg/Kg dry	1		SW-846 6010D	5/13/19	5/15/19 2:27	EJB

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Project Location: Wayland, MA

Sample Description:

Work Order: 19E0566

Date Received: 5/9/2019

Field Sample #: V-304 (2-4)

Sampled: 5/8/2019 10:10

Sample ID: 19E0566-04

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	94.1		% Wt	1		SM 2540G	5/13/19	5/14/19 13:17	MJR



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

Project Location: Wayland, MA

Sample Description:

Work Order: 19E0566

Date Received: 5/9/2019

Field Sample #: V-305 (2-4)

Sampled: 5/8/2019 10:20

Sample ID: 19E0566-05

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.7	mg/Kg dry	1		SW-846 6010D	5/13/19	5/15/19 2:33	EJB
Copper	37	0.35	mg/Kg dry	1		SW-846 6010D	5/13/19	5/15/19 2:33	EJB
Lead	22	0.52	mg/Kg dry	1		SW-846 6010D	5/13/19	5/15/19 2:33	EJB

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19E0566

Date Received: 5/9/2019

Field Sample #: V-305 (2-4)

Sampled: 5/8/2019 10:20

Sample ID: 19E0566-05

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	93.5		% Wt	1		SM 2540G	5/13/19	5/14/19 13:17	MJR

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19E0566

Date Received: 5/9/2019

Field Sample #: V-306 (2-4)

Sampled: 5/8/2019 10:30

Sample ID: 19E0566-06

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.8	mg/Kg dry	1		SW-846 6010D	5/13/19	5/15/19 2:39	EJB
Copper	31	0.36	mg/Kg dry	1		SW-846 6010D	5/13/19	5/15/19 2:39	EJB
Lead	25	0.53	mg/Kg dry	1		SW-846 6010D	5/13/19	5/15/19 2:39	EJB

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Project Location: Wayland, MA

Sample Description:

Work Order: 19E0566

Date Received: 5/9/2019

Field Sample #: V-306 (2-4)

Sampled: 5/8/2019 10:30

Sample ID: 19E0566-06

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	92.6		% Wt	1		SM 2540G	5/13/19	5/14/19 13:17	MJR

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19E0566

Date Received: 5/9/2019

Field Sample #: V-307 (2-4)

Sampled: 5/8/2019 10:40

Sample ID: 19E0566-07

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.8	mg/Kg dry	1		SW-846 6010D	5/13/19	5/15/19 3:04	EJB
Copper	28	0.36	mg/Kg dry	1		SW-846 6010D	5/13/19	5/15/19 3:04	EJB
Lead	57	0.54	mg/Kg dry	1		SW-846 6010D	5/13/19	5/15/19 3:04	EJB

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19E0566

Date Received: 5/9/2019

Field Sample #: V-307 (2-4)

Sampled: 5/8/2019 10:40

Sample ID: 19E0566-07

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	93.2		% Wt	1		SM 2540G	5/13/19	5/14/19 13:18	MJR

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19E0566

Date Received: 5/9/2019

Field Sample #: V-308 (2-4)

Sampled: 5/8/2019 10:50

Sample ID: 19E0566-08

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.7	mg/Kg dry	1		SW-846 6010D	5/13/19	5/15/19 3:10	EJB
Copper	43	0.35	mg/Kg dry	1		SW-846 6010D	5/13/19	5/15/19 3:10	EJB
Lead	22	0.52	mg/Kg dry	1		SW-846 6010D	5/13/19	5/15/19 3:10	EJB

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Project Location: Wayland, MA

Sample Description:

Work Order: 19E0566

Date Received: 5/9/2019

Field Sample #: V-308 (2-4)

Sampled: 5/8/2019 10:50

Sample ID: 19E0566-08

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	93.6		% Wt	1		SM 2540G	5/13/19	5/14/19 13:18	MJR



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

Project Location: Wayland, MA

Sample Description:

Work Order: 19E0566

Date Received: 5/9/2019

Field Sample #: V-309 (0-2)

Sampled: 5/8/2019 11:00

Sample ID: 19E0566-09

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.7	mg/Kg dry	1		SW-846 6010D	5/13/19	5/15/19 3:16	EJB
Copper	4.2	0.34	mg/Kg dry	1		SW-846 6010D	5/13/19	5/15/19 3:16	EJB
Lead	5.9	0.51	mg/Kg dry	1		SW-846 6010D	5/13/19	5/15/19 3:16	EJB

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19E0566

Date Received: 5/9/2019

Field Sample #: V-309 (0-2)

Sampled: 5/8/2019 11:00

Sample ID: 19E0566-09

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	96.2		% Wt	1		SM 2540G	5/13/19	5/14/19 13:18	MJR

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19E0566

Date Received: 5/9/2019

Field Sample #: V-310 (0-2)

Sampled: 5/8/2019 11:05

Sample ID: 19E0566-10

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.7	mg/Kg dry	1		SW-846 6010D	5/13/19	5/15/19 3:23	EJB
Copper	400	0.34	mg/Kg dry	1		SW-846 6010D	5/13/19	5/15/19 3:23	EJB
Lead	140	0.50	mg/Kg dry	1		SW-846 6010D	5/13/19	5/15/19 3:23	EJB

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19E0566

Date Received: 5/9/2019

Field Sample #: V-310 (0-2)

Sampled: 5/8/2019 11:05

Sample ID: 19E0566-10

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	96.4		% Wt	1		SM 2540G	5/13/19	5/14/19 13:18	MJR

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19E0566

Date Received: 5/9/2019

Field Sample #: V-311 (0-2)

Sampled: 5/8/2019 11:10

Sample ID: 19E0566-11

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.7	mg/Kg dry	1		SW-846 6010D	5/13/19	5/15/19 3:29	EJB
Copper	5.9	0.34	mg/Kg dry	1		SW-846 6010D	5/13/19	5/15/19 3:29	EJB
Lead	8.8	0.51	mg/Kg dry	1		SW-846 6010D	5/13/19	5/15/19 3:29	EJB

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19E0566

Date Received: 5/9/2019

Field Sample #: V-311 (0-2)

Sampled: 5/8/2019 11:10

Sample ID: 19E0566-11

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	96.0		% Wt	1		SM 2540G	5/13/19	5/14/19 13:18	MJR

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19E0566

Date Received: 5/9/2019

Field Sample #: V-312 (2-4)

Sampled: 5/8/2019 11:15

Sample ID: 19E0566-12

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.9	mg/Kg dry	1		SW-846 6010D	5/13/19	5/15/19 3:36	EJB
Copper	20	0.38	mg/Kg dry	1		SW-846 6010D	5/13/19	5/15/19 3:36	EJB
Lead	150	0.57	mg/Kg dry	1		SW-846 6010D	5/13/19	5/15/19 3:36	EJB

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19E0566

Date Received: 5/9/2019

Field Sample #: V-312 (2-4)

Sampled: 5/8/2019 11:15

Sample ID: 19E0566-12

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	89.5		% Wt	1		SM 2540G	5/13/19	5/14/19 13:19	MJR



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

Project Location: Wayland, MA

Sample Description:

Work Order: 19E0566

Date Received: 5/9/2019

Field Sample #: V-313 (2-4)

Sampled: 5/8/2019 11:20

Sample ID: 19E0566-13

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.8	mg/Kg dry	1		SW-846 6010D	5/13/19	5/15/19 3:42	EJB
Copper	24	0.36	mg/Kg dry	1		SW-846 6010D	5/13/19	5/15/19 3:42	EJB
Lead	86	0.54	mg/Kg dry	1		SW-846 6010D	5/13/19	5/15/19 3:42	EJB

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19E0566

Date Received: 5/9/2019

Field Sample #: V-313 (2-4)

Sampled: 5/8/2019 11:20

Sample ID: 19E0566-13

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	89.1		% Wt	1		SM 2540G	5/13/19	5/14/19 13:19	MJR

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19E0566

Date Received: 5/9/2019

Field Sample #: V-314 (2-4)

Sampled: 5/8/2019 11:25

Sample ID: 19E0566-14

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.8	mg/Kg dry	1		SW-846 6010D	5/13/19	5/15/19 3:48	EJB
Copper	32	0.37	mg/Kg dry	1		SW-846 6010D	5/13/19	5/15/19 3:48	EJB
Lead	55	0.55	mg/Kg dry	1		SW-846 6010D	5/13/19	5/15/19 3:48	EJB

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19E0566

Date Received: 5/9/2019

Field Sample #: V-314 (2-4)

Sampled: 5/8/2019 11:25

Sample ID: 19E0566-14

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	91.3		% Wt	1		SM 2540G	5/13/19	5/14/19 13:19	MJR

**Sample Extraction Data**

**Prep Method: % Solids-SM 2540G**

Lab Number [Field ID]	Batch	Date
19E0566-01 [V-301 (2-4)]	B230611	05/13/19
19E0566-02 [V-302 (2-4)]	B230611	05/13/19
19E0566-03 [V-303 (2-4)]	B230611	05/13/19
19E0566-04 [V-304 (2-4)]	B230611	05/13/19
19E0566-05 [V-305 (2-4)]	B230611	05/13/19
19E0566-06 [V-306 (2-4)]	B230611	05/13/19
19E0566-07 [V-307 (2-4)]	B230611	05/13/19
19E0566-08 [V-308 (2-4)]	B230611	05/13/19
19E0566-09 [V-309 (0-2)]	B230611	05/13/19
19E0566-10 [V-310 (0-2)]	B230611	05/13/19
19E0566-11 [V-311 (0-2)]	B230611	05/13/19
19E0566-12 [V-312 (2-4)]	B230611	05/13/19
19E0566-13 [V-313 (2-4)]	B230611	05/13/19
19E0566-14 [V-314 (2-4)]	B230611	05/13/19

**Prep Method: SW-846 3050B-SW-846 6010D**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19E0566-01 [V-301 (2-4)]	B230590	1.55	50.0	05/13/19
19E0566-02 [V-302 (2-4)]	B230590	1.52	50.0	05/13/19
19E0566-03 [V-303 (2-4)]	B230590	1.48	50.0	05/13/19
19E0566-04 [V-304 (2-4)]	B230590	1.56	50.0	05/13/19
19E0566-05 [V-305 (2-4)]	B230590	1.54	50.0	05/13/19
19E0566-06 [V-306 (2-4)]	B230590	1.52	50.0	05/13/19
19E0566-07 [V-307 (2-4)]	B230590	1.50	50.0	05/13/19
19E0566-08 [V-308 (2-4)]	B230590	1.55	50.0	05/13/19
19E0566-09 [V-309 (0-2)]	B230590	1.52	50.0	05/13/19
19E0566-10 [V-310 (0-2)]	B230590	1.54	50.0	05/13/19
19E0566-11 [V-311 (0-2)]	B230590	1.55	50.0	05/13/19
19E0566-12 [V-312 (2-4)]	B230590	1.48	50.0	05/13/19
19E0566-13 [V-313 (2-4)]	B230590	1.57	50.0	05/13/19
19E0566-14 [V-314 (2-4)]	B230590	1.48	50.0	05/13/19

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

**QUALITY CONTROL**

**Metals Analyses (Total) - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B230590 - SW-846 3050B</b>										
<b>Blank (B230590-BLK1)</b>										
Prepared: 05/13/19 Analyzed: 05/15/19										
Antimony	ND	1.7	mg/Kg wet							
Copper	ND	0.33	mg/Kg wet							
Lead	ND	0.50	mg/Kg wet							
<b>LCS (B230590-BS1)</b>										
Prepared: 05/13/19 Analyzed: 05/15/19										
Antimony	52.7	5.0	mg/Kg wet	133		39.6	1.5-101.5			
Copper	270	0.99	mg/Kg wet	301		89.8	77.4-108.3			
Lead	198	1.5	mg/Kg wet	241		82.2	76.3-110.4			
<b>LCS Dup (B230590-BSD1)</b>										
Prepared: 05/13/19 Analyzed: 05/15/19										
Antimony	51.8	4.9	mg/Kg wet	133		38.9	1.5-101.5	1.77	30	
Copper	268	0.98	mg/Kg wet	301		89.0	77.4-108.3	0.853	30	
Lead	199	1.5	mg/Kg wet	241		82.8	76.3-110.4	0.632	30	
<b>MRL Check (B230590-MRL1)</b>										
Prepared: 05/13/19 Analyzed: 05/15/19										
Lead	0.536	0.50	mg/Kg wet	0.497		108	80-120			

---

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

**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.

**CERTIFICATIONS**

**Certified Analyses included in this Report**

Analyte	Certifications
<i>SW-846 6010D in Soil</i>	
Antimony	CT,NH,NY,ME,VA,NC
Copper	CT,NH,NY,ME,VA,NC
Lead	CT,NH,NY,AIHA,ME,VA,NC

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

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2005	100033	03/1/2020
MA	Massachusetts DEP	M-MA100	06/30/2019
CT	Connecticut Department of Public Health	PH-0567	09/30/2019
NY	New York State Department of Health	10899 NELAP	04/1/2020
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2020
RI	Rhode Island Department of Health	LAO00112	12/30/2019
NC	North Carolina Div. of Water Quality	652	12/31/2019
NJ	New Jersey DEP	MA007 NELAP	06/30/2019
FL	Florida Department of Health	E871027 NELAP	06/30/2019
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2019
ME	State of Maine	2011028	06/9/2019
VA	Commonwealth of Virginia	460217	12/14/2019
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2019
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2019
NC-DW	North Carolina Department of Health	25703	07/31/2019





Phone: 413-525-2332  
 Fax: 413-525-6405  
 Email: info@contestlabs.com

http://www.contestlabs.com

Doc # 381 Rev 1\_03242017

CHAIN OF CUSTODY RECORD

39 Spruce Street  
 East Longmeadow, MA 01028

Company Name: Vortex  
 Address: 100 N Washington St, Suite 302, Boston MA  
 Phone: 781-952-6000  
 Project Name: River's Edge  
 Project Location: Wayland, MA  
 Project Number: 46047  
 Project Manager: K. Sarson  
 Con-Test Quote Name/Number:  
 Invoice Recipient: K. Sarson  
 Sampled By: K. Sarson

**Requested Turnaround Time**  
 7-Day  10-Day   
 Due Date: 5 DAY

**Rush Approval Required**  
 1-Day  3-Day   
 2-Day  4-Day

**Data Delivery**  
 Format: PDF  EXCEL   
 Other: END  
 CLP Like Data Pkg Required:   
 Email To: ksarson@vortexeng.com  
ksarson@overlook.com  
 Fax To #:

Requested Turnaround Time								Rush Approval Required								Data Delivery								ANALYSIS REQUESTED							
7-Day <input type="checkbox"/>								10-Day <input type="checkbox"/>								Format: PDF <input checked="" type="checkbox"/> EXCEL <input checked="" type="checkbox"/>								Other: <u>END</u>							
Due Date: <u>5 DAY</u>								1-Day <input type="checkbox"/>								3-Day <input type="checkbox"/>								CLP Like Data Pkg Required: <input type="checkbox"/>							
								2-Day <input type="checkbox"/>								4-Day <input type="checkbox"/>								Email To: <u>ksarson@vortexeng.com</u>							
																								Fax To #:							

# of Containers  
 Preservation Code  
 Container Code  
**Dissolved Metals Samples**  
 Field Filtered  
 Lab to Filter  
**Orthophosphate Samples**  
 Field Filtered  
 Lab to Filter

Con-Test Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	Composite	Grab	Matrix Code	Conc Code	ANALYSIS REQUESTED							
1	V-301 (2-4)	5/8/19	0940	X		S		X Total lead, Copper & Antimony							
	V-301 (4-6) *		0945					TCLP Pb + (see comments)							
2	V-302 (2-4)		0950					IF NEEDED							
	V-302 (4-6) *		0955												
3	V-303 (2-4)		1000												
	V-303 (4-6) *		1005												
4	V-304 (2-4)		1010												
	V-304 (4-6) *		1015												
5	V-305 (2-4)		1020												
	V-305 (4-6) *		1025												

**1 Matrix Codes:**  
 GW = Ground Water  
 WW = Waste Water  
 DW = Drinking Water  
 A = Air  
 S = Soil  
 SL = Sludge  
 SOL = Solid  
 O = Other (please define)

**2 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)

**3 Container Codes:**  
 A = Amber Glass  
 G = Glass  
 P = Plastic  
 ST = Sterile  
 V = Vial  
 S = Summa Canister  
 T = Tedlar Bag  
 O = Other (please define)

Comments:  
\*Please hold starred samples  
TCLP if total lead > 100 mg/kg +


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: 5/9/19 11:27  
 Received by: (signature) [Signature] Date/Time: 5/9/19 11:27  
 Relinquished by: (signature) [Signature] Date/Time: 5/9/19 6:10  
 Received by: (signature) [Signature] Date/Time: 5/9/19 10:10  
 Relinquished by: (signature) [Signature] Date/Time:  
 Received by: (signature) [Signature] Date/Time:

**Detection Limit Requirements**  
 MA  CT  Other:

**Special Requirements**  
 MA MCP Required  
 MCP Certification Form Required  
 CT RCP Required  
 RCP Certification Form Required  
 MA State DW Required  
 PWSID #

**Project Entity**  
 Government  Municipality  MWRA  WRTA  
 Federal  21 J  School  
 City  Brownfield  MBTA



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**Other**  
 Chromatogram  
 AIHA-LAP, LLC

**PCB ONLY**  
 Soxhlet  
 Non Soxhlet



CHAIN OF CUSTODY RECORD

Company Name: Vertex  
 Address: 100N Washington St, 302, Boston MA 02114  
 Phone: 781-952-6000  
 Project Name: Rivers Edge  
 Project Location: Wayland MA  
 Project Number: 460647  
 Project Manager: K. Sarsen  
 Con-Test Quote Name/Number:  
 Invoice Recipient: K. Sarsen  
 Sampled By: K. Sarsen

**Requested Turnaround Time**  
 7-Day  10-Day   
 Due Date: 5-DAY

**Rush Approval Required**  
 1-Day  3-Day   
 2-Day  4-Day

**Data Delivery**  
 Format: PDF  EXCEL   
 Other: EOD  
 CLP Like Data Pkg Required:   
 Email To: ksarsen@vertexeng.com  
 Fax To #:

ANALYSIS REQUESTED									

# of Containers  
 2 Preservation Code  
 3 Container Code

**Dissolved Metals Samples**  
 Field Filtered  
 Lab to Filter

**Orthophosphate Samples**  
 Field Filtered  
 Lab to Filter

Con-Test Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	Composites	Grab	Matrix Code	Conc Code		
13	V-313(2-4)	5/8/19	1120	Y		S			
14	V-314(2-4)	5/8/19	1125	X		S			

**1 Matrix Codes:**  
 GW = Ground Water  
 WW = Waste Water  
 DW = Drinking Water  
 A = Air  
 S = Soil  
 SL = Sludge  
 SOL = Solid  
 O = Other (please define)


**2 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)

**3 Container Codes:**  
 A = Amber Glass  
 G = Glass  
 P = Plastic  
 ST = Sterile  
 V = Vial  
 S = Summa Canister  
 T = Tedlar Bag  
 O = Other (please define)

Comments:  
 + TCLP if total lead > 100 mg/kg

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) <u>[Signature]</u>	Date/Time: 5/9/19 12:27	<b>Detection Limit Requirements</b> MA	<b>Special Requirements</b> <input checked="" type="checkbox"/> MA MCP Required
Received by: (signature) <u>[Signature]</u>	Date/Time: 5/9/19 11:27		<input type="checkbox"/> MCP Certification Form Required
Relinquished by: (signature) <u>[Signature]</u>	Date/Time: 5/9/19 6:10	CT	<input type="checkbox"/> CT RCP Required
Received by: (signature) <u>[Signature]</u>	Date/Time: 5/9/19 19:10		<input type="checkbox"/> RCP Certification Form Required
Relinquished by: (signature) <u>[Signature]</u>	Date/Time:	Other	<input type="checkbox"/> MA State DW Required
Received by: (signature)	Date/Time:	PWSID #	
<b>Project Entity</b>		<b>Other</b>	
<input type="checkbox"/> Government	<input type="checkbox"/> Municipality	<input type="checkbox"/> MWRA	<input type="checkbox"/> WRTA
<input type="checkbox"/> Federal	<input type="checkbox"/> 21 J	<input type="checkbox"/> School	
<input type="checkbox"/> City	<input type="checkbox"/> Brownfield	<input type="checkbox"/> MBTA	



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**PCB ONLY**  
 Soxhlet  
 Non Soxhlet

I Have Not Confirmed Sample Container Numbers With Lab Staff Before Relinquishing Over Samples \_\_\_\_\_



**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 Verde  
 Received By SL Date 6/4/14 Time 16:10  
 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 # 3 Actual Temp - 5.8  
 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 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? F Who was notified? \_\_\_\_\_  
 Are there Short Holds? F Who was notified? \_\_\_\_\_  
 Is there enough Volume? T  
 Is there Headspace where applicable? N/A 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? N/A Acid \_\_\_\_\_ Base \_\_\_\_\_

Vials	#	Containers:	#	#	#
Unp-		1 Liter Amb.		1 Liter Plastic	16 oz Amb.
HCL-		500 mL Amb.		500 mL Plastic	8oz Amb/Clear <u>14</u>
Meoh-		250 mL Amb.		250 mL Plastic	4oz Amb/Clear
Bisulfate-		Flashpoint		Col./Bacteria	2oz Amb/Clear
DI-		Other Glass		Other Plastic	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 <u>15</u>
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 #: 19E0566
Project Location: Wayland, MA	RTN:

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]  
19E0566-01 thru 19E0566-14

Matrices: Soil

**CAM Protocol (check all that below)**

8260 VOC CAM II A ( )	7470/7471 Hg CAM III B ( )	MassDEP VPH CAM IV A ( )	8082 PCB CAM V A ( )	9014 Total Cyanide/PAC CAM VI A ( )	6860 Perchlorate CAM VIII B ( )
8270 SVOC CAM II B ( )	7010 Metals CAM III C ( )	MassDEP VPH CAM IV C ( )	8081 Pesticides CAM V B ( )	7196 Hex Cr CAM VI B ( )	MassDEP APH CAM IX A ( )
6010 Metals CAM III A (X)	6020 Metals CAM III D ( )	MassDEP EPH CAM IV B ( )	8151 Herbicides CAM V C ( )	8330 Explosives CAM VIII A ( )	TO-15 VOC CAM IX B ( )

**Affirmative response to Questions A through F is required for "Presumptive Certainty" status**

<b>A</b>	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?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>B</b>	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>C</b>	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>D</b>	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?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>E a</b>	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).	<input type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>E b</b>	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	<input type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>F</b>	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)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>

**A response to questions G, H and I below is required for "Presumptive Certainty" status**

<b>G</b>	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
----------	---	--

**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.**

<b>H</b>	Were all QC performance standards specified in the CAM protocol(s) achieved?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>I</b>	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <sup>1</sup>

<sup>1</sup>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: Lisa Worthington Position: Technical Representative  
Printed Name: Lisa A. Worthington Date: 05/15/19

May 21, 2019

Kristen Sarson  
Vertex Engineering - Boston  
100 North Washington St. Suite 302  
Boston, MA 02114

Project Location: Wayland, MA  
Client Job Number:  
Project Number: 46047  
Laboratory Work Order Number: 19E0870

Enclosed are results of analyses for samples received by the laboratory on May 15, 2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, reading "Jessica Hoffman", is displayed on a light blue rectangular background. The signature is written in a cursive, flowing style.

Jessica L. Hoffman  
Project Manager

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---

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

Vertex Engineering - Boston  
100 North Washington St. Suite 302  
Boston, MA 02114  
ATTN: Kristen Sarson

REPORT DATE: 5/21/2019

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 46047

---

**ANALYTICAL SUMMARY**

---

WORK ORDER NUMBER: 19E0870

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

PROJECT LOCATION: Wayland, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
V-310 (0-2)	19E0870-01	Soil		SM 2540G SW-846 6010D	
V-312 (2-4)	19E0870-02	Soil		SM 2540G SW-846 6010D	



**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 lead was requested and reported.

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 "Tod Kopycinski". The signature is written in a cursive style with a large, sweeping initial "T".

Tod E. Kopycinski  
Laboratory Director

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19E0870

Date Received: 5/15/2019

Sampled: 5/8/2019 11:05

Field Sample #: V-310 (0-2)

Sample ID: 19E0870-01

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	96.4		% Wt	1		SM 2540G	5/16/19	5/16/19 20:39	KG

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19E0870

Date Received: 5/15/2019

Field Sample #: V-310 (0-2)

Sampled: 5/8/2019 11:05

Sample ID: 19E0870-01

Sample Matrix: Soil

TCLP - Metals Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Lead	20	0.050	mg/L	5		SW-846 6010D	5/18/19	5/20/19 19:33	EJB

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19E0870

Date Received: 5/15/2019

Sampled: 5/8/2019 11:15

Field Sample #: V-312 (2-4)

Sample ID: 19E0870-02

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	89.5		% Wt	1		SM 2540G	5/16/19	5/16/19 20:39	KG

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19E0870

Date Received: 5/15/2019

Field Sample #: V-312 (2-4)

Sampled: 5/8/2019 11:15

Sample ID: 19E0870-02

Sample Matrix: Soil

TCLP - Metals Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Lead	0.099	0.010	mg/L	1		SW-846 6010D	5/18/19	5/20/19 17:45	EJB

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

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

Lab Number [Field ID]	Batch	Date
19E0870-01 [V-310 (0-2)]	B230991	05/16/19
19E0870-02 [V-312 (2-4)]	B230991	05/16/19

**Prep Method: SW-846 3010A-SW-846 6010D**

Leachates were extracted on 5/17/2019 per SW-846 1311 in Batch B231084

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
19E0870-01 [V-310 (0-2)]	B231263	50.0	50.0	05/18/19
19E0870-02 [V-312 (2-4)]	B231263	50.0	50.0	05/18/19

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**QUALITY CONTROL**

**TCLP - Metals Analyses - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B231263 - SW-846 3010A</b>										
<b>Blank (B231263-BLK1)</b>										
Prepared: 05/18/19 Analyzed: 05/20/19										
Lead	ND	0.010	mg/L							
<b>LCS (B231263-BS1)</b>										
Prepared: 05/18/19 Analyzed: 05/20/19										
Lead	0.501	0.010	mg/L	0.500		100	80-120			
<b>LCS Dup (B231263-BSD1)</b>										
Prepared: 05/18/19 Analyzed: 05/20/19										
Lead	0.486	0.010	mg/L	0.500		97.3	80-120	2.94	20	

---

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

**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.



**CERTIFICATIONS**

**Certified Analyses included in this Report**

Analyte	Certifications
---------	----------------

*SW-846 6010D in Water*

Lead NY,CT,ME,NC,NH,VA

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

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2005	100033	03/1/2020
MA	Massachusetts DEP	M-MA100	06/30/2019
CT	Connecticut Department of Public Health	PH-0567	09/30/2019
NY	New York State Department of Health	10899 NELAP	04/1/2020
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2020
RI	Rhode Island Department of Health	LAO00112	12/30/2019
NC	North Carolina Div. of Water Quality	652	12/31/2019
NJ	New Jersey DEP	MA007 NELAP	06/30/2019
FL	Florida Department of Health	E871027 NELAP	06/30/2019
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2019
ME	State of Maine	2011028	06/9/2019
VA	Commonwealth of Virginia	460217	12/14/2019
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2019
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2019
NC-DW	North Carolina Department of Health	25703	07/31/2019



Phone: 413-525-2332  
 Fax: 413-525-6405  
 Email: info@contestlabs.com

http://www.contestlabs.com

Doc # 381 Rev 1\_03242017

CHAIN OF CUSTODY RECORD

39 Spruce Street  
 East Longmeadow, MA 01028

Company Name: Vortex  
 Address: 100 N Washington St, Suite 302, Boston MA  
 Phone: 781-952-6000  
 Project Name: River's Edge  
 Project Location: Wayland, MA  
 Project Number: 46047  
 Project Manager: K. Sarson  
 Con-Test Quote Name/Number:  
 Invoice Recipient: K. Sarson  
 Sampled By: K. Sarson

**Requested Turnaround Time**  
 7-Day  10-Day   
 Due Date: 5 DAY

**Rush Approval Required**  
 1-Day  3-Day   
 2-Day  4-Day

**Data Delivery**  
 Format: PDF  EXCEL   
 Other: END  
 CLP Like Data Pkg Required:   
 Email To: ksarson@vortexeng.com  
foalord@overtrading.com  
 Fax To #:

Requested Turnaround Time	Rush Approval Required	Data Delivery	Analysis Requested
7-Day <input type="checkbox"/>	1-Day <input type="checkbox"/>	Format: PDF <input checked="" type="checkbox"/>	ANALYSIS REQUESTED Total Lead, Copper & Antimony TCLP Pb + (see comments) IF NEEDED
10-Day <input type="checkbox"/>	3-Day <input type="checkbox"/>	EXCEL <input checked="" type="checkbox"/>	
Due Date: <u>5 DAY</u>	2-Day <input type="checkbox"/>	Other: <u>END</u>	
	4-Day <input type="checkbox"/>	CLP Like Data Pkg Required: <input type="checkbox"/>	
		Email To: <u>ksarson@vortexeng.com</u>	
		<u>foalord@overtrading.com</u>	
		Fax To #:	

# of Containers  
 Preservation Code  
 Container Code  
**Dissolved Metals Samples**  
 Field Filtered  
 Lab to Filter  
**Orthophosphate Samples**  
 Field Filtered  
 Lab to Filter

Con-Test Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	Composite	Grab	Matrix Code	Conc Code
	V-301 (2-4)	5/8/19	0940	X		S	
	V-301 (4-6) *		0945				
2	V-302 (2-4)		0950				
	V-302 (4-6) *		0955				
3	V-303 (2-4)		1000				
	V-303 (4-6) *		1005				
4	V-304 (2-4)		1010				
	V-304 (4-6) *		1015				
5	V-305 (2-4)		1020				
	V-305 (4-6) *		1025				

samples reactivated for  
 TCLP Lead per rule. JLH  
 5/15/19 on samples  
 V-310 (0-2) and V-3 (2-4)

Comments:  
 \*Please hold starred samples  
 TCLP if total lead > 100 mg/kg +

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

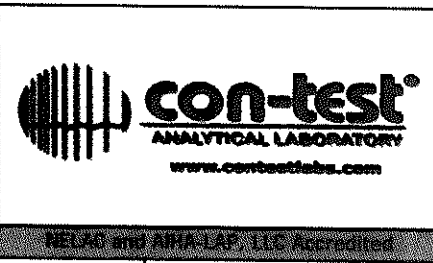
- Matrix Codes:**  
 GW = Ground Water  
 WW = Waste Water  
 DW = Drinking Water  
 A = Air  
 S = Soil  
 SL = Sludge  
 DL = Solid  
 O = Other (please define)
- Preservation Codes:**  
 I = Iced  
 H = HCL  
 M = Methanol  
 N = Nitric Acid  
 S = Sulfuric Acid  
 B = Sodium Bisulfate  
 X = Sodium Hydroxide  
 T = Sodium Thiosulfate  
 O = Other (please define)

Relinquished by: (signature) [Signature] Date/Time: 5/9/19 11:27  
 Received by: (signature) [Signature] Date/Time: 5/9/19 11:27  
 Relinquished by: (signature) [Signature] Date/Time: 5/9/19 6:10  
 Received by: (signature) [Signature] Date/Time: 5/9/19 10:10  
 Relinquished by: (signature) [Signature] Date/Time:  
 Received by: (signature) [Signature] Date/Time:

**Detection Limit Requirements**  
 MA  CT  Other

**Special Requirements**  
 MA MCP Required  
 MCP Certification Form Required  
 CT RCP Required  
 RCP Certification Form Required  
 MA State DW Required  
 PWSID #

**Project Entity**  
 Government  Municipality  MWRA  WRTA  
 Federal  21 J  School  
 City  Brownfield  MBTA



- 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



Company Name: Veri-Tech  
Address: 100N Washington St, 302 Boston, MA 02114  
Phone: 781-952-6060  
Project Name: Blue Edge  
Project Location: Wayland  
Project Number: 400017  
Project Manager: K. Sarsor  
Con-Test Quote Name/Number: F. Sarsor  
Invoice Recipient: F. Sarsor  
Sampled By: K. Sarsor

Requested Turnaround Time: 5 DAY  
Due Date: 5/24/19  
Number of Samples Required:  
1-Day  3-Day   
2-Day  4-Day   
Data Delivery:  
Format: PDF  EXCEL   
Other: EDD  
CLP Like Data Pkg Required:   
Email To: ksarsor@veritech.com  
Fax To #:

1 Matrix Codes:  
GW = Ground Water  
WW = Waste Water  
DW = Drinking Water  
A = Air  
S = Soil  
SL = Sludge  
SOL = Solid  
O = Other (please define)

2 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)

3 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

Cont-Test Work Order #	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	Composite	Date	Matrix Code	Done Date
6	N-306 (2-4)	5/8/19	1030	✓		S	
7	V-306 (4-6)		1035				
8	V-307 (2-4)		1040				
9	V-307 (4-6)		1045				
10	V-308 (2-4)		1050				
11	V-308 (4-6)		1055				
01	V-309 (0-2)		1100				
02	V-310 (0-2)		1105				
	V-311 (0-2)		1110				
	V-312 (2-4)		1115				

ANALYSIS REQUESTED  
Total Lead, Copper, Arsenic, PCB, TPH  
NEEDED →

Comments: \* Please hold stored samples  
TCUP if total lead > 100 mg/kg +

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

Detection Limits Requirements	Special Requirements
MA	MA MCP Required <input checked="" type="checkbox"/>
	MCP Certification Form Required <input type="checkbox"/>
CT	CT RCP Required <input type="checkbox"/>
	RCP Certification Form Required <input type="checkbox"/>
OTHER	MA State DW Required <input type="checkbox"/>
	PWSID #

Project Entity:  
 Government  
 Federal  
 City  
 Municipality  
 21 J  
 Brownfield  
 MWRA  
 School  
 MBTA  
 WRTA  
 Chromatogram  
 AIHA-LAP, LLC  
 Other

Relinquished by: (signature) [Signature] Date/Time: 5/8/19 11:27  
 Received by: (signature) [Signature] Date/Time: 5/19/19 11:27  
 Relinquished by: (signature) [Signature] Date/Time: 5/19/19 6:10  
 Received by: (signature) [Signature] Date/Time: 5/19/19 10:10  
 Relinquished by: (signature) [Signature] Date/Time: 5/8  
 Received by: (signature) [Signature] Date/Time: 5/8





**Client Name:** BPX  
**Address:** 100N WASHINGTON ST 302, BOSTON MA 02114  
**Phone:** 781-952-6664  
**Project Name:** BPX  
**Project Location:** Wayland MA  
**Project Number:** 110047  
**Project Manager:** K. Sarsen  
**Con-Test Quote Name/Number:**  
**Invoice Recipient:** K. Sarsen  
**Sampled By:** K. Sarsen

**Requested Turnaround Time:**  
 7-Day  10-Day   
**Due Date:** 5-DAY  
**Analysis Requested:**  
 1-Day  3-Day   
 2-Day  4-Day   
**Data Delivery:**  
 Format: PDF  EXCEL   
 Other: GD  
 CLP Like Data Pkg Required:   
 Email To: K.sarsen@wayland.org  
 Fax To #:

Con-Test Work Order #	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	Composites	Grab	Matrix Code	Conc Code
<u>3</u>	<u>V-313 (2-4)</u>	<u>5/8/19</u>	<u>1120</u>	<u>2</u>		<u>S</u>	
<u>4</u>	<u>V-314 (2-4)</u>	<u>5/8/19</u>	<u>1125</u>	<u>2</u>		<u>S</u>	

Comments:

+ TCLP if total lead  $710 \text{ mg/kg}$

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)	Date/Time:
<u>[Signature]</u>	<u>5/9/19 1127</u>
Received by: (signature)	Date/Time:
<u>[Signature]</u>	<u>5/9/19 1127</u>
Relinquished by: (signature)	Date/Time:
<u>[Signature]</u>	<u>5/9/19 6:10</u>
Received by: (signature)	Date/Time:
<u>[Signature]</u>	<u>5/9/19 1410</u>
Relinquished by: (signature)	Date/Time:
<u>[Signature]</u>	
Received by: (signature)	Date/Time:
<u>[Signature]</u>	

Detection Limit Requirements	Special Requirements
MA	MA MCP Required <input checked="" type="checkbox"/>
	MCP Certification Form Required <input type="checkbox"/>
CT	CT RCP Required <input type="checkbox"/>
	RCP Certification Form Required <input type="checkbox"/>
Other	MA State DW Required <input type="checkbox"/>
	PWSID #

# of Containers	Preservation Code	Container Code
1		
1		
1		

**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

I Have Not Confirmed Sample Container Numbers With Lab Staff Before Relinquishing Over Samples \_\_\_\_\_



**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 Verde  
 Received By SL Date 6/4/14 Time 16:0  
 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 # 3 Actual Temp - 5.8  
 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 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? F Who was notified? \_\_\_\_\_  
 Are there Short Holds? F Who was notified? \_\_\_\_\_  
 Is there enough Volume? T  
 Is there Headspace where applicable? N/A 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? N/A Acid \_\_\_\_\_ Base \_\_\_\_\_

Vials	#	Containers:	#	#	#	#
Unp-		1 Liter Amb.		1 Liter Plastic		16 oz Amb.
HCL-		500 mL Amb.		500 mL Plastic		8oz Amb/Clear <u>14</u>
Meoh-		250 mL Amb.		250 mL Plastic		4oz Amb/Clear
Bisulfate-		Flashpoint		Col./Bacteria		2oz Amb/Clear
DI-		Other Glass		Other Plastic		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 <u>15</u>
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 #: 19E0870		
Project Location: Wayland, MA			RTN:		
This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)] 19E0870-01 thru 19E0870-02					
Matrices: Soil					
<b>CAM Protocol (check all that below)</b>					
8260 VOC CAM II A ( )	7470/7471 Hg CAM III B ( )	MassDEP VPH CAM IV A ( )	8082 PCB CAM V A ( )	9014 Total Cyanide/PAC CAM VI A ( )	6860 Perchlorate CAM VIII B ( )
8270 SVOC CAM II B ( )	7010 Metals CAM III C ( )	MassDEP VPH CAM IV C ( )	8081 Pesticides CAM V B ( )	7196 Hex Cr CAM VI B ( )	MassDEP APH CAM IX A ( )
6010 Metals CAM III A (X)	6020 Metals CAM III D ( )	MassDEP EPH CAM IV B ( )	8151 Herbicides CAM V C ( )	8330 Explosives CAM VIII A ( )	TO-15 VOC CAM IX B ( )
<b>Affirmative response to Questions A through F is required for "Presumptive Certainty" status</b>					
<b>A</b>	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?				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>B</b>	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>C</b>	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>D</b>	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?				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>E a</b>	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).				<input type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>E b</b>	APH and TO-15 Methods only: Was the complete analyte list reported for each method?				<input type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>F</b>	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)?				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>A response to questions G, H and I below is required for "Presumptive Certainty" status</b>					
<b>G</b>	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>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.</b>					
<b>H</b>	Were all QC performance standards specified in the CAM protocol(s) achieved?				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>I</b>	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?				<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <sup>1</sup>
<sup>1</sup> All Negative responses must be addressed in an attached Environmental Laboratory case narrative.					
<b>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.</b>					
Signature: <u>Tod Kopyscinski</u>			Position: Laboratory Director		
Printed Name: <u>Tod E. Kopyscinski</u>			Date: <u>05/21/19</u>		

April 5, 2021

Kristen Sarson  
Vertex Engineering - Boston  
100 North Washington St. Suite 302  
Boston, MA 02114

Project Location: Wayland, MA  
Client Job Number:  
Project Number: 67404  
Laboratory Work Order Number: 21C1453

Enclosed are results of analyses for samples received by the laboratory on March 29, 2021. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jessica L. Hoffman  
Project Manager

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

Vertex Engineering - Boston  
 100 North Washington St. Suite 302  
 Boston, MA 02114  
 ATTN: Kristen Sarson

REPORT DATE: 4/5/2021

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 67404

**ANALYTICAL SUMMARY**

WORK ORDER NUMBER: 21C1453

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

PROJECT LOCATION: Wayland, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
V-106 (MW)	21C1453-01	Ground Water		SM 21-22 4500 P E SM21-22 4500 H B SW-846 6020B	
V-202 (MW)	21C1453-02	Ground Water		SM 21-22 4500 P E SM21-22 4500 H B SW-846 6020B	
V-201 (MW)	21C1453-03	Ground Water		SM 21-22 4500 P E SM21-22 4500 H B SW-846 6020B	

---

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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.

#### SM 21-22 4500 P E

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**Qualifications:****Z-01**

SM 4500 test had a point outside acceptable back calculated recoveries. Re-analysis yielded similar nonconformances.

**Analyte & Samples(s) Qualified:****Phosphorus, Total**

21C1453-02[V-202 (MW)], 21C1453-03[V-201 (MW)]

#### SM21-22 4500 H B

---

**Qualifications:****H-05**

Holding time was exceeded. pH analysis should be performed immediately at time of sampling. Nominal 15 minute holding time was exceeded.

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

21C1453-01[V-106 (MW)], 21C1453-02[V-202 (MW)], 21C1453-03[V-201 (MW)]

The results of analyses reported only relate to samples submitted to Con-Test, a Pace 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  
Technical Representative

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

Project Location: Wayland, MA

Sample Description:

Work Order: 21C1453

Date Received: 3/29/2021

Field Sample #: V-106 (MW)

Sampled: 3/29/2021 09:45

Sample ID: 21C1453-01

Sample Matrix: Ground Water

**Metals Analyses (Dissolved)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.0	µg/L	1		SW-846 6020B	4/4/21	4/5/21 12:18	TBC
Copper	5.3	1.0	µg/L	1		SW-846 6020B	4/4/21	4/5/21 12:18	TBC
Lead	ND	0.50	µg/L	1		SW-846 6020B	4/4/21	4/5/21 12:18	TBC

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Project Location: Wayland, MA

Sample Description:

Work Order: 21C1453

Date Received: 3/29/2021

Sampled: 3/29/2021 09:45

Field Sample #: V-106 (MW)

Sample ID: 21C1453-01

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
pH @17.9°C	5.8		pH Units	1	H-05	SM21-22 4500 H B	3/30/21	3/30/21 17:15	ALG
Phosphorus, Total	ND	0.050	mg/L	1		SM 21-22 4500 P E	3/31/21	4/1/21 15:09	EC

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Project Location: Wayland, MA

Sample Description:

Work Order: 21C1453

Date Received: 3/29/2021

Field Sample #: V-202 (MW)

Sampled: 3/29/2021 11:00

Sample ID: 21C1453-02

Sample Matrix: Ground Water

**Metals Analyses (Dissolved)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.0	µg/L	1		SW-846 6020B	4/4/21	4/5/21 12:28	TBC
Copper	2.8	1.0	µg/L	1		SW-846 6020B	4/4/21	4/5/21 12:28	TBC
Lead	ND	0.50	µg/L	1		SW-846 6020B	4/4/21	4/5/21 12:28	TBC

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Project Location: Wayland, MA

Sample Description:

Work Order: 21C1453

Date Received: 3/29/2021

Field Sample #: V-202 (MW)

Sampled: 3/29/2021 11:00

Sample ID: 21C1453-02

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
pH @18.2°C	6.4		pH Units	1	H-05	SM21-22 4500 H B	3/30/21	3/30/21 17:15	ALG
Phosphorus, Total	0.067	0.050	mg/L	1	Z-01	SM 21-22 4500 P E	4/2/21	4/5/21 10:15	EC

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Project Location: Wayland, MA

Sample Description:

Work Order: 21C1453

Date Received: 3/29/2021

Field Sample #: V-201 (MW)

Sampled: 3/29/2021 12:00

Sample ID: 21C1453-03

Sample Matrix: Ground Water

**Metals Analyses (Dissolved)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.0	µg/L	1		SW-846 6020B	4/4/21	4/5/21 12:31	TBC
Copper	7.4	1.0	µg/L	1		SW-846 6020B	4/4/21	4/5/21 12:31	TBC
Lead	ND	0.50	µg/L	1		SW-846 6020B	4/4/21	4/5/21 12:31	TBC

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Project Location: Wayland, MA

Sample Description:

Work Order: 21C1453

Date Received: 3/29/2021

Field Sample #: V-201 (MW)

Sampled: 3/29/2021 12:00

Sample ID: 21C1453-03

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
pH @17.7°C	6.4		pH Units	1	H-05	SM21-22 4500 H B	3/30/21	3/30/21 17:15	ALG
Phosphorus, Total	ND	0.050	mg/L	1	Z-01	SM 21-22 4500 P E	4/2/21	4/5/21 10:15	EC



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**Sample Extraction Data**
**SM 21-22 4500 P E**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
21C1453-01 [V-106 (MW)]	B279170	50.0	50.0	03/31/21

**SM 21-22 4500 P E**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
21C1453-02 [V-202 (MW)]	B279358	50.0	50.0	04/02/21
21C1453-03 [V-201 (MW)]	B279358	50.0	50.0	04/02/21

**SM21-22 4500 H B**

Lab Number [Field ID]	Batch	Initial [mL]	Date
21C1453-01 [V-106 (MW)]	B279113	50.0	03/30/21
21C1453-02 [V-202 (MW)]	B279113	50.0	03/30/21
21C1453-03 [V-201 (MW)]	B279113	50.0	03/30/21

**Prep Method: SW-846 3005A Dissolved    Analytical Method: SW-846 6020B**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
21C1453-01 [V-106 (MW)]	B279397	50.0	50.0	04/04/21
21C1453-02 [V-202 (MW)]	B279397	50.0	50.0	04/04/21
21C1453-03 [V-201 (MW)]	B279397	50.0	50.0	04/04/21

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**QUALITY CONTROL**
**Metals Analyses (Dissolved) - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	--------------------	-------	----------------	------------------	------	----------------	-----	--------------	-------

**Batch B279397 - SW-846 3005A Dissolved**
**Blank (B279397-BLK1)**

Prepared: 04/04/21 Analyzed: 04/05/21

Antimony	ND	1.0	µg/L							
Copper	ND	1.0	µg/L							
Lead	ND	0.50	µg/L							

**LCS (B279397-BS1)**

Prepared: 04/04/21 Analyzed: 04/05/21

Antimony	494	10	µg/L	500		98.8	80-120			
Copper	923	10	µg/L	1000		92.3	80-120			
Lead	468	5.0	µg/L	500		93.7	80-120			

**LCS Dup (B279397-BSD1)**

Prepared: 04/04/21 Analyzed: 04/05/21

Antimony	501	10	µg/L	500		100	80-120	1.34	20	
Copper	940	10	µg/L	1000		94.0	80-120	1.89	20	
Lead	478	5.0	µg/L	500		95.6	80-120	2.01	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
<b>Batch B279113 - SM21-22 4500 H B</b>										
<b>LCS (B279113-BS1)</b>				Prepared & Analyzed: 03/30/21						
pH	6.00		pH Units	6.00		99.9	90-110			
<b>Batch B279170 - SM 21-22 4500 P E</b>										
<b>Blank (B279170-BLK1)</b>				Prepared: 03/31/21 Analyzed: 04/01/21						
Phosphorus, Total	ND	0.050	mg/L							
<b>LCS (B279170-BS1)</b>				Prepared: 03/31/21 Analyzed: 04/01/21						
Phosphorus, Total	0.16	0.050	mg/L	0.176		90.6	82.6-116			
<b>LCS Dup (B279170-BSD1)</b>				Prepared: 03/31/21 Analyzed: 04/01/21						
Phosphorus, Total	0.17	0.050	mg/L	0.176		98.3	82.6-116	8.16	20.4	
<b>Batch B279358 - SM 21-22 4500 P E</b>										
<b>Blank (B279358-BLK1)</b>				Prepared: 04/02/21 Analyzed: 04/05/21						
Phosphorus, Total	ND	0.050	mg/L							
<b>LCS (B279358-BS1)</b>				Prepared: 04/02/21 Analyzed: 04/05/21						
Phosphorus, Total	0.15	0.050	mg/L	0.176		85.6	82.6-116			
<b>LCS Dup (B279358-BSD1)</b>				Prepared: 04/02/21 Analyzed: 04/05/21						
Phosphorus, Total	0.15	0.050	mg/L	0.176		83.8	82.6-116	2.16	20.4	

**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.
H-05	Holding time was exceeded. pH analysis should be performed immediately at time of sampling. Nominal 15 minute holding time was exceeded.
Z-01	SM 4500 test had a point outside acceptable back calculated recoveries. Re-analysis yielded similar nonconformances.

**CERTIFICATIONS**

**Certified Analyses included in this Report**

Analyte	Certifications
<b>SM 21-22 4500 P E in Water</b>	
Phosphorus, Total	CT,MA,NH,NY,RI,NC,ME,VA
<b>SM21-22 4500 H B in Water</b>	
pH	CT,MA,RI
<b>SW-846 6020B in Water</b>	
Antimony	CT,NH,NY,ME,VA,NC
Copper	CT,NH,NY,NC,ME,VA
Lead	CT,NH,NY,NC,ME,VA

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2021
CT	Connecticut Department of Public Health	PH-0165	12/31/2022
NY	New York State Department of Health	10899 NELAP	04/1/2021
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2022
RI	Rhode Island Department of Health	LAO00112	12/30/2021
NC	North Carolina Div. of Water Quality	652	12/31/2021
NJ	New Jersey DEP	MA007 NELAP	06/30/2021
FL	Florida Department of Health	E871027 NELAP	06/30/2021
VT	Vermont Department of Health Lead Laboratory	LL720741	07/30/2021
ME	State of Maine	MA00100	06/9/2021
VA	Commonwealth of Virginia	460217	12/14/2021
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2021
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2021
NC-DW	North Carolina Department of Health	25703	07/31/2021
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2021
MI	Dept. of Env, Great Lakes, and Energy	9100	09/6/2021

21C1453

Doc # 381 Rev 2\_06262019

39 Spruce Street  
East Longmeadow, MA 01028

CHAIN OF CUSTODY RECORD

http://www.contestlabs.com

Phone: 413-525-2332  
Fax: 413-525-6405  
Email: info@contestlabs.com

**Vertex**

Address: 100N Washington St, 302 Boston MA  
Phone: 617-275-5407

Project Location: Weymouth MA  
Project Number: 67404  
Project Manager: K. Sarsion

Con-Test Quote Name/Number:  
Invoice Recipient: K. Sarsion  
Sampled By: K. Sarsion

ANALYSIS REQUESTED

7-Day PFAS 10-Day (std) 10-Day Due Date: 8  
1-Day 3-Day 4-Day Field Filtered Lab to Filter  
2-Day Field Filtered Lab to Filter  
format: PDF EXCEL  
Other: X

CLP Like Data Pkg Required:  
Email To: K.Sarsion@vertexeng.com  
Fax To #:

Matrix Code	COMP/GRAB	Matrix Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE
GW	grab	GW	3				
↓	↓	↓	3				
↓	↓	↓	3				

Handwritten notes: Total Number Of: 15  
VIALS, GLASS, PLASTIC, BACTERIA, ENCORE  
Glassware in the fridge? Y/N  
Glassware in freezer? Y/N  
Prepackaged Cooler? Y/N  
\*Context is not responsible for missing samples from prepackaged coolers

- 1 Matrix Codes:**  
GW = Ground Water  
WW = Waste Water  
DW = Drinking Water  
A = Air  
S = Soil  
SL = Sludge  
SOL = Solid  
O = Other (please define)
- 2 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)

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

NECAC and AIHA-LAP, LLC Accredited

Other:  Chromatogram  AIHA-LAP, LLC

PCB ONLY:  Soxhlet  Non Soxhlet

Client Comments:

Relinquished by: (signature) Date/Time: 3-24-21/14:55  
Received by: (signature) Date/Time: 3-24-21/14:55  
Relinquished by: (signature) Date/Time: 3-29-21/18:35  
Received by: (signature) Date/Time: 3-29-21/18:35  
Relinquished by: (signature) Date/Time: 3-29-21/18:35  
Received by: (signature) Date/Time: 3-29-21/18:35

Project Entity

Government:  Federal  City  
Municipality: 21 J Brownfield  
MWRA School MBTA  
WRTA

Comments:

Disclaimer: Con-Test Labs is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Con-Test values your partnership on each project and will try to assist with missing information, but will not be held accountable.

I Have Not Confirmed Sample Container Numbers With Lab Staff Before Relinquishing Over Samples \_\_\_\_\_



**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 Vertex

Received By RLF Date 3/29/21 Time 1825

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 # 3 Actual Temp - 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 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

Are there Rushes? F

Are there Short Holds? T

Is there enough Volume? T

Is there Headspace where applicable? NA

Proper Media/Containers Used? T

Were trip blanks received? F

Do all samples have the proper pH? \_\_\_\_\_

Who was notified? \_\_\_\_\_

Who was notified? \_\_\_\_\_

Who was notified? David

MS/MSD? F

Is splitting samples required? F

On COC? F

Acid T Base NA

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

**Unused Media**

Vials	#	Containers:	#	#	#
Unp-		1 Liter Amb.		1 Liter Plastic	
HCL-		500 mL Amb.		500 mL Plastic	
Meoh-		250 mL Amb.		250 mL Plastic	
Bisulfate-		Col./Bacteria		Flashpoint	
DI-		Other Plastic		Other Glass	
Thiosulfate-		SOC Kit		Plastic Bag	
Sulfuric-		Perchlorate		Ziplock	

Comments:







*CERTIFICATE OF ANALYSIS*

Steve Winters  
United Retek  
47 South Maple Street  
Bellingham, MA 02019

**RE: Rivers Edge Wayland MA (21-08)**  
**ESS Laboratory Work Order Number: 21D0381**

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard  
Laboratory Director

**REVIEWED**

*By ESS Laboratory at 12:33 pm, Apr 15, 2021*

**Analytical Summary**

The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.



*CERTIFICATE OF ANALYSIS*

Client Name: United Retek  
Client Project ID: Rivers Edge Wayland MA

ESS Laboratory Work Order: 21D0381

**SAMPLE RECEIPT**

The following samples were received on April 13, 2021 for the analyses specified on the enclosed Chain of Custody Record.

<b>Lab Number</b>	<b>Sample Name</b>	<b>Matrix</b>	<b>Analysis</b>
21D0381-01	No 1 Firing Range	Soil	1311, 1311/6010C
21D0381-02	No 2 Firing Range	Soil	1311, 1311/6010C
21D0381-03	No 3 Firing Range	Soil	1311, 1311/6010C
21D0381-04	No 4 Firing Range	Soil	1311, 1311/6010C
21D0381-05	No 5 Firing Range	Soil	1311, 1311/6010C
21D0381-06	No 6 Firing Range	Soil	1311, 1311/6010C



CERTIFICATE OF ANALYSIS

Client Name: United Retek  
Client Project ID: Rivers Edge Wayland MA

ESS Laboratory Work Order: 21D0381

**PROJECT NARRATIVE**

**No unusual observations noted.**

**End of Project Narrative.**

**DATA USABILITY LINKS**

*To ensure you are viewing the most current version of the documents below, please clear your internet cookies for [www.ESSLaboratory.com](http://www.ESSLaboratory.com). Consult your IT Support personnel for information on how to clear your internet cookies.*

[Definitions of Quality Control Parameters](#)

[Semivolatile Organics Internal Standard Information](#)

[Semivolatile Organics Surrogate Information](#)

[Volatile Organics Internal Standard Information](#)

[Volatile Organics Surrogate Information](#)

[EPH and VPH Alkane Lists](#)



*CERTIFICATE OF ANALYSIS*

Client Name: United Retek  
Client Project ID: Rivers Edge Wayland MA

ESS Laboratory Work Order: 21D0381

**CURRENT SW-846 METHODOLOGY VERSIONS**

**Analytical Methods**

- 1010A - Flashpoint
- 6010C - ICP
- 6020A - ICP MS
- 7010 - Graphite Furnace
- 7196A - Hexavalent Chromium
- 7470A - Aqueous Mercury
- 7471B - Solid Mercury
- 8011 - EDB/DBCP/TCP
- 8015C - GRO/DRO
- 8081B - Pesticides
- 8082A - PCB
- 8100M - TPH
- 8151A - Herbicides
- 8260B - VOA
- 8270D - SVOA
- 8270D SIM - SVOA Low Level
- 9014 - Cyanide
- 9038 - Sulfate
- 9040C - Aqueous pH
- 9045D - Solid pH (Corrosivity)
- 9050A - Specific Conductance
- 9056A - Anions (IC)
- 9060A - TOC
- 9095B - Paint Filter
- MADEP 04-1.1 - EPH
- MADEP 18-2.1 - VPH

**Prep Methods**

- 3005A - Aqueous ICP Digestion
- 3020A - Aqueous Graphite Furnace / ICP MS Digestion
- 3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
- 3060A - Solid Hexavalent Chromium Digestion
- 3510C - Separatory Funnel Extraction
- 3520C - Liquid / Liquid Extraction
- 3540C - Manual Soxhlet Extraction
- 3541 - Automated Soxhlet Extraction
- 3546 - Microwave Extraction
- 3580A - Waste Dilution
- 5030B - Aqueous Purge and Trap
- 5030C - Aqueous Purge and Trap
- 5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.



*CERTIFICATE OF ANALYSIS*

Client Name: United Retek  
Client Project ID: Rivers Edge Wayland MA  
Client Sample ID: No 1 Firing Range  
Date Sampled: 04/12/21 00:00  
Percent Solids: N/A

ESS Laboratory Work Order: 21D0381  
ESS Laboratory Sample ID: 21D0381-01  
Sample Matrix: Soil  
Units: mg/L

Extraction Method: 3005A TCLP

**1311 TCLP Metals**

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>TCLP Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>I/V</u>	<u>F/V</u>	<u>Batch</u>
Lead	ND (0.050)		1311/6010C		1	KJK	04/14/21 21:28	50	50	DD11338



*CERTIFICATE OF ANALYSIS*

Client Name: United Retek  
Client Project ID: Rivers Edge Wayland MA  
Client Sample ID: No 1 Firing Range  
Date Sampled: 04/12/21 00:00  
Percent Solids: N/A  
Initial Volume: 100  
Final Volume: 2000  
Extraction Method: 1311

ESS Laboratory Work Order: 21D0381  
ESS Laboratory Sample ID: 21D0381-01  
Sample Matrix: Soil  
Units: °C  
Analyst: NAR  
Prepared: 4/13/21 19:35

**TCLP Extraction by 1311**

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Batch</u>
Temperature (Min C)	20.1 (N/A)		1311		1	NAR	04/14/21 11:40	DD11341
Temperature (Max C)	21.9 (N/A)		1311		1	NAR	04/14/21 11:40	DD11341
Temperature (Range)	Temperature is not within 23 +/-2 °C. (N/A)							



*CERTIFICATE OF ANALYSIS*

Client Name: United Retek  
Client Project ID: Rivers Edge Wayland MA  
Client Sample ID: No 2 Firing Range  
Date Sampled: 04/12/21 00:00  
Percent Solids: N/A

ESS Laboratory Work Order: 21D0381  
ESS Laboratory Sample ID: 21D0381-02  
Sample Matrix: Soil  
Units: mg/L

Extraction Method: 3005A TCLP

**1311 TCLP Metals**

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>TCLP Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>I/V</u>	<u>F/V</u>	<u>Batch</u>
Lead	ND (0.050)		1311/6010C		1	KJK	04/14/21 21:29	50	50	DD11338



*CERTIFICATE OF ANALYSIS*

Client Name: United Retek  
Client Project ID: Rivers Edge Wayland MA  
Client Sample ID: No 2 Firing Range  
Date Sampled: 04/12/21 00:00  
Percent Solids: N/A  
Initial Volume: 100  
Final Volume: 2000  
Extraction Method: 1311

ESS Laboratory Work Order: 21D0381  
ESS Laboratory Sample ID: 21D0381-02  
Sample Matrix: Soil  
Units: °C  
Analyst: NAR  
Prepared: 4/13/21 19:35

**TCLP Extraction by 1311**

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Batch</u>
Temperature (Min C)	20.1 (N/A)		1311		1	NAR	04/14/21 11:40	DD11341
Temperature (Max C)	21.9 (N/A)		1311		1	NAR	04/14/21 11:40	DD11341
Temperature (Range)	Temperature is not within 23 +/-2 °C. (N/A)							





*CERTIFICATE OF ANALYSIS*

Client Name: United Retek  
Client Project ID: Rivers Edge Wayland MA  
Client Sample ID: No 3 Firing Range  
Date Sampled: 04/12/21 00:00  
Percent Solids: N/A

ESS Laboratory Work Order: 21D0381  
ESS Laboratory Sample ID: 21D0381-03  
Sample Matrix: Soil  
Units: mg/L

Extraction Method: 3005A TCLP

**1311 TCLP Metals**

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>TCLP Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>I/V</u>	<u>F/V</u>	<u>Batch</u>
Lead	ND (0.050)		1311/6010C		1	KJK	04/14/21 21:31	50	50	DD11338



*CERTIFICATE OF ANALYSIS*

Client Name: United Retek  
Client Project ID: Rivers Edge Wayland MA  
Client Sample ID: No 3 Firing Range  
Date Sampled: 04/12/21 00:00  
Percent Solids: N/A  
Initial Volume: 100  
Final Volume: 2000  
Extraction Method: 1311

ESS Laboratory Work Order: 21D0381  
ESS Laboratory Sample ID: 21D0381-03  
Sample Matrix: Soil  
Units: °C  
Analyst: NAR  
Prepared: 4/13/21 19:35

**TCLP Extraction by 1311**

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Batch</u>
Temperature (Min C)	20.1 (N/A)		1311		1	NAR	04/14/21 11:40	DD11341
Temperature (Max C)	21.9 (N/A)		1311		1	NAR	04/14/21 11:40	DD11341
Temperature (Range)	Temperature is not within 23 +/-2 °C. (N/A)							



*CERTIFICATE OF ANALYSIS*

Client Name: United Retek  
Client Project ID: Rivers Edge Wayland MA  
Client Sample ID: No 4 Firing Range  
Date Sampled: 04/12/21 00:00  
Percent Solids: N/A

ESS Laboratory Work Order: 21D0381  
ESS Laboratory Sample ID: 21D0381-04  
Sample Matrix: Soil  
Units: mg/L

Extraction Method: 3005A TCLP

**1311 TCLP Metals**

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>TCLP Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>I/V</u>	<u>F/V</u>	<u>Batch</u>
Lead	ND (0.050)		1311/6010C		1	KJK	04/14/21 21:32	50	50	DD11338



*CERTIFICATE OF ANALYSIS*

Client Name: United Retek  
Client Project ID: Rivers Edge Wayland MA  
Client Sample ID: No 4 Firing Range  
Date Sampled: 04/12/21 00:00  
Percent Solids: N/A  
Initial Volume: 100  
Final Volume: 2000  
Extraction Method: 1311

ESS Laboratory Work Order: 21D0381  
ESS Laboratory Sample ID: 21D0381-04  
Sample Matrix: Soil  
Units: °C  
Analyst: NAR  
Prepared: 4/13/21 19:35

**TCLP Extraction by 1311**

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Batch</u>
Temperature (Min C)	20.1 (N/A)		1311		1	NAR	04/14/21 11:40	DD11341
Temperature (Max C)	21.9 (N/A)		1311		1	NAR	04/14/21 11:40	DD11341
Temperature (Range)	Temperature is not within 23 +/-2 °C. (N/A)							



*CERTIFICATE OF ANALYSIS*

Client Name: United Retek  
Client Project ID: Rivers Edge Wayland MA  
Client Sample ID: No 5 Firing Range  
Date Sampled: 04/12/21 00:00  
Percent Solids: N/A

ESS Laboratory Work Order: 21D0381  
ESS Laboratory Sample ID: 21D0381-05  
Sample Matrix: Soil  
Units: mg/L

Extraction Method: 3005A TCLP

**1311 TCLP Metals**

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>TCLP Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>I/V</u>	<u>F/V</u>	<u>Batch</u>
Lead	ND (0.050)		1311/6010C		1	KJK	04/14/21 21:34	50	50	DD11338



*CERTIFICATE OF ANALYSIS*

Client Name: United Retek  
Client Project ID: Rivers Edge Wayland MA  
Client Sample ID: No 5 Firing Range  
Date Sampled: 04/12/21 00:00  
Percent Solids: N/A  
Initial Volume: 100  
Final Volume: 2000  
Extraction Method: 1311

ESS Laboratory Work Order: 21D0381  
ESS Laboratory Sample ID: 21D0381-05  
Sample Matrix: Soil  
Units: °C  
Analyst: NAR  
Prepared: 4/13/21 19:35

**TCLP Extraction by 1311**

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Batch</u>
Temperature (Min C)	20.1 (N/A)		1311		1	NAR	04/14/21 11:40	DD11341
Temperature (Max C)	21.9 (N/A)		1311		1	NAR	04/14/21 11:40	DD11341
Temperature (Range)	Temperature is not within 23 +/-2 °C. (N/A)							



*CERTIFICATE OF ANALYSIS*

Client Name: United Retek  
Client Project ID: Rivers Edge Wayland MA  
Client Sample ID: No 6 Firing Range  
Date Sampled: 04/12/21 00:00  
Percent Solids: N/A

ESS Laboratory Work Order: 21D0381  
ESS Laboratory Sample ID: 21D0381-06  
Sample Matrix: Soil  
Units: mg/L

Extraction Method: 3005A TCLP

**1311 TCLP Metals**

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>TCLP Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>I/V</u>	<u>F/V</u>	<u>Batch</u>
Lead	ND (0.050)		1311/6010C		1	KJK	04/14/21 21:35	50	50	DD11338



*CERTIFICATE OF ANALYSIS*

Client Name: United Retek  
Client Project ID: Rivers Edge Wayland MA  
Client Sample ID: No 6 Firing Range  
Date Sampled: 04/12/21 00:00  
Percent Solids: N/A  
Initial Volume: 100  
Final Volume: 2000  
Extraction Method: 1311

ESS Laboratory Work Order: 21D0381  
ESS Laboratory Sample ID: 21D0381-06  
Sample Matrix: Soil  
Units: °C  
Analyst: NAR  
Prepared: 4/13/21 19:35

**TCLP Extraction by 1311**

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Batch</u>
Temperature (Min C)	20.1 (N/A)		1311		1	NAR	04/14/21 11:40	DD11341
Temperature (Max C)	21.9 (N/A)		1311		1	NAR	04/14/21 11:40	DD11341
Temperature (Range)	Temperature is not within 23 +/-2 °C. (N/A)							





*CERTIFICATE OF ANALYSIS*

Client Name: United Retek  
Client Project ID: Rivers Edge Wayland MA

ESS Laboratory Work Order: 21D0381

**Quality Control Data**

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
<b>1311 TCLP Metals</b>										
<b>Batch DD11338 - 3005A_TCLP</b>										
<b>Blank</b>										
Lead	ND	0.050	mg/L							
<b>Blank</b>										
Lead	ND	0.050	mg/L							
<b>LCS</b>										
Lead	0.497	0.050	mg/L	0.5000		99	80-120			
<b>LCS Dup</b>										
Lead	0.496	0.050	mg/L	0.5000		99	80-120	0.2	20	



*CERTIFICATE OF ANALYSIS*

Client Name: United Retek  
Client Project ID: Rivers Edge Wayland MA

ESS Laboratory Work Order: 21D0381

**Notes and Definitions**

- Z18 Temperature is not within 23 +/- 2 °C.
- U Analyte included in the analysis, but not detected
- ND Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference
- MDL Method Detection Limit
- MRL Method Reporting Limit
- LOD Limit of Detection
- LOQ Limit of Quantitation
- DL Detection Limit
- I/V Initial Volume
- F/V Final Volume
- § Subcontracted analysis; see attached report
- 1 Range result excludes concentrations of surrogates and/or internal standards eluting in that range.
- 2 Range result excludes concentrations of target analytes eluting in that range.
- 3 Range result excludes the concentration of the C9-C10 aromatic range.
- Avg Results reported as a mathematical average.
- NR No Recovery
- [CALC] Calculated Analyte
- SUB Subcontracted analysis; see attached report
- RL Reporting Limit
- EDL Estimated Detection Limit
- MF Membrane Filtration
- MPN Most Probably Number
- TNTC Too numerous to Count
- CFU Colony Forming Units



*CERTIFICATE OF ANALYSIS*

Client Name: United Retek  
Client Project ID: Rivers Edge Wayland MA

ESS Laboratory Work Order: 21D0381

**ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS**

**ENVIRONMENTAL**

Rhode Island Potable and Non Potable Water: LAI00179

<http://www.health.ri.gov/find/labs/analytical/ESS.pdf>

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750

[http://www.ct.gov/dph/lib/dph/environmental\\_health/environmental\\_laboratories/pdf/OutofStateCommercialLaboratories.pdf](http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf)

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002

<http://www.maine.gov/dhhs/meecd/environmental-health/dwp/partners/labCert.shtml>

Massachusetts Potable and Non Potable Water: M-RI002

<http://public.dep.state.ma.us/Labcert/Labcert.aspx>

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424

<http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm>

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313

<http://www.wadsworth.org/labcert/elap/comm.html>

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006

[http://datamine2.state.nj.us/DEP\\_OPRA/OpraMain/pi\\_main?mode=pi\\_by\\_site&sort\\_order=PI\\_NAMEA&Select+a+Site:=58715](http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715)

United States Department of Agriculture Soil Permit: P330-12-00139

Pennsylvania: 68-01752

<http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx>

## ESS Laboratory Sample and Cooler Receipt Checklist

Client: United Retek - TB

ESS Project ID: 21D0381

Shipped/Delivered Via: ESS Courier

Date Received: 4/13/2021

Project Due Date: 4/15/2021

Days for Project: 2 Day

1. Air bill manifest present?  No  
Air No.: NA
2. Were custody seals present?  No
3. Is radiation count <100 CPM?  Yes
4. Is a Cooler Present?  Yes  
Temp: 1.2 Iced with: Ice
5. Was COC signed and dated by client?  Yes

6. Does COC match bottles?  Yes
7. Is COC complete and correct?  Yes
8. Were samples received intact?  Yes
9. Were labs informed about **short holds & rushes**?  Yes / No / NA
10. Were any analyses received outside of hold time?  Yes / No

11. Any Subcontracting needed?  Yes / No  
ESS Sample IDs: \_\_\_\_\_  
Analysis: \_\_\_\_\_  
TAT: \_\_\_\_\_

12. Were VOAs received?  Yes / No  
a. Air bubbles in aqueous VOAs?  Yes / No  
b. Does methanol cover soil completely?  Yes / No / NA

13. Are the samples properly preserved?  Yes / No  
a. If metals preserved upon receipt: Date: \_\_\_\_\_ Time: \_\_\_\_\_ By: \_\_\_\_\_  
b. Low Level VOA vials frozen: Date: \_\_\_\_\_ Time: \_\_\_\_\_ By: \_\_\_\_\_

Sample Receiving Notes:

14. Was there a need to contact Project Manager?  Yes / No  
a. Was there a need to contact the client?  Yes / No  
Who was contacted? \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_ By: \_\_\_\_\_

Sample Number	Container ID	Proper Container	Air Bubbles Present	Sufficient Volume	Container Type	Preservative	Record pH (Cyanide and 608 Pesticides)
1	153093	Yes	N/A	Yes	8 oz jar	NP	
2	153094	Yes	N/A	Yes	8 oz jar	NP	
3	153095	Yes	N/A	Yes	8 oz jar	NP	
4	153096	Yes	N/A	Yes	8 oz jar	NP	
5	153097	Yes	N/A	Yes	8 oz jar	NP	
6	153098	Yes	N/A	Yes	8 oz jar	NP	

**2nd Review**

- Were all containers scanned into storage/lab? Initials: ID
- Are barcode labels on correct containers?  Yes / No
- Are all Flashpoint stickers attached/container ID # circled?  Yes / No / NA
- Are all Hex Chrome stickers attached?  Yes / No / NA
- Are all QC stickers attached?  Yes / No / NA
- Are VOA stickers attached if bubbles noted?  Yes / No / NA

Completed By: [Signature] Date & Time: 4/13/21 1821

# ESS Laboratory Sample and Cooler Receipt Checklist

Client: United Retek - TB

ESS Project ID: 21D0381

Date Received: 4/13/2021

Reviewed By: 

Date & Time: 4/13/21 1837



185 Frances Avenue  
 Cranston, RI 02921  
 Phone: 401-461-7181  
 Fax: 401-461-4486  
 www.esslaboratory.com

### CHAIN OF CUSTODY

ESS Lab # **2100381** Page **1** of **1**

Turn Time  > 5  5  4  3  2  1  Same Day

Regulatory State: Criteria:

Is this project for any of the following?:

CT RCP  MA MCP  RGP  Permit  401 WQ

**ELECTRONIC DELIVERABLES (Final Reports are PDF)**

Limit Checker  State Forms  EQiS  
 Excel  Hard Copy  Enviro Data  
 CLP-Like Package  Other (Specify) →

CLIENT INFORMATION				PROJECT INFORMATION			REQUESTED ANALYSES												Total Number of Bottles
Client: <b>UNITED RETEK CORP.</b>				Project Name: <b>RIVERS EDGE</b>			<div style="display: flex; justify-content: space-between;"> <div> <p>Client acknowledges that sampling is compliant with all EPA / State regulatory programs</p> </div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);"> <p>TCLPPB</p> </div> </div>												
Address: <b>47 SOUTH MAPLE ST. BELLINGHAM MA 02019</b>				Project Location: <b>WAYLANDS MA</b>															
Phone: <b>508-478-5500</b>				Project Number: <b>21-08</b>															
Email Distribution List: <b>EDDIE@UNITED RJAN@RETEK.COM STEVE@UNITEDRETEK.COM</b>				Project Manager: <b>N/A</b>															
				Bill to: <b>UNITEDRETEK</b>															
				PO#: <b>N/A</b>															
				Quote#: <b>N/A</b>															
ESS Lab ID	Collection Date	Collection Time	Sample Type	Sample Matrix	Sample ID														
1	4-12-21	P.M.	C	S	#1 FIRING RANGE														
2	↓	↓	↓	↓	#2														
3	↓	↓	↓	↓	#3														
4	↓	↓	↓	↓	#4														
5	↓	↓	↓	↓	#5														
6	↓	↓	↓	↓	#6														
Container Type: AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubitainer J-Jar O-Other P-Poly S-Sterile V-Vial																			
Container Volume: 1-100 mL 2-2.5 gal 3-250 mL 4-300 mL 5-500 mL 6-1L 7-VOA 8-2 oz 9-4 oz 10-8 oz 11-Other*																			
Preservation Code: 1-Non Preserved 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-Methanol 7-Na2S2O3 8-ZnAc2, NaOH 9-NH4Cl 10-DI H2O 11-Other*																			

**Chain needs to be filled out neatly and completely for on time delivery.**

Laboratory Use Only			Comments: * Please specify "Other" preservative and containers types in this space				All samples submitted are subject to ESS Laboratory's payment terms and conditions.			Dissolved Filtration <input type="checkbox"/> Lab Filter	
Cooler Temperature (°C): <b>1.2 100</b>											
Relinquished by (Signature)	Date	Time	Received by (Signature)	Date	Time	Relinquished by (Signature)	Date	Time	Received by (Signature)		
<i>[Signature]</i>	4-13-21	A.M.	<i>[Signature]</i>	4/13/21	11:09	<i>[Signature]</i>	4/13/21	18:05	<i>[Signature]</i>		
Relinquished by (Signature)	Date	Time	Received by (Signature)	Date	Time	Relinquished by (Signature)	Date	Time	Received by (Signature)		



*CERTIFICATE OF ANALYSIS*

Steve Winters  
United Retek  
47 South Maple Street  
Bellingham, MA 02019

**RE: Rivers Edge Wayland MA (21-08)**  
**ESS Laboratory Work Order Number: 21D0382**

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard  
Laboratory Director

**REVIEWED**  
*By ESS Laboratory at 12:35 pm, Apr 15, 2021*

**Analytical Summary**

The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.



*CERTIFICATE OF ANALYSIS*

Client Name: United Retek  
Client Project ID: Rivers Edge Wayland MA

ESS Laboratory Work Order: 21D0382

**SAMPLE RECEIPT**

The following samples were received on April 13, 2021 for the analyses specified on the enclosed Chain of Custody Record.

<b>Lab Number</b>	<b>Sample Name</b>	<b>Matrix</b>	<b>Analysis</b>
21D0382-01	1 Cell-E7	Soil	1311, 1311/6010C
21D0382-02	2 Cell-E7	Soil	1311, 1311/6010C





CERTIFICATE OF ANALYSIS

Client Name: United Retek  
Client Project ID: Rivers Edge Wayland MA

ESS Laboratory Work Order: 21D0382

**PROJECT NARRATIVE**

**No unusual observations noted.**

**End of Project Narrative.**

**DATA USABILITY LINKS**

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[Definitions of Quality Control Parameters](#)

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[Semivolatile Organics Surrogate Information](#)

[Volatile Organics Internal Standard Information](#)

[Volatile Organics Surrogate Information](#)

[EPH and VPH Alkane Lists](#)



*CERTIFICATE OF ANALYSIS*

Client Name: United Retek  
Client Project ID: Rivers Edge Wayland MA

ESS Laboratory Work Order: 21D0382

**CURRENT SW-846 METHODOLOGY VERSIONS**

**Analytical Methods**

- 1010A - Flashpoint
- 6010C - ICP
- 6020A - ICP MS
- 7010 - Graphite Furnace
- 7196A - Hexavalent Chromium
- 7470A - Aqueous Mercury
- 7471B - Solid Mercury
- 8011 - EDB/DBCP/TCP
- 8015C - GRO/DRO
- 8081B - Pesticides
- 8082A - PCB
- 8100M - TPH
- 8151A - Herbicides
- 8260B - VOA
- 8270D - SVOA
- 8270D SIM - SVOA Low Level
- 9014 - Cyanide
- 9038 - Sulfate
- 9040C - Aqueous pH
- 9045D - Solid pH (Corrosivity)
- 9050A - Specific Conductance
- 9056A - Anions (IC)
- 9060A - TOC
- 9095B - Paint Filter
- MADEP 04-1.1 - EPH
- MADEP 18-2.1 - VPH

**Prep Methods**

- 3005A - Aqueous ICP Digestion
- 3020A - Aqueous Graphite Furnace / ICP MS Digestion
- 3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
- 3060A - Solid Hexavalent Chromium Digestion
- 3510C - Separatory Funnel Extraction
- 3520C - Liquid / Liquid Extraction
- 3540C - Manual Soxhlet Extraction
- 3541 - Automated Soxhlet Extraction
- 3546 - Microwave Extraction
- 3580A - Waste Dilution
- 5030B - Aqueous Purge and Trap
- 5030C - Aqueous Purge and Trap
- 5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.



*CERTIFICATE OF ANALYSIS*

Client Name: United Retek  
Client Project ID: Rivers Edge Wayland MA  
Client Sample ID: 1 Cell-E7  
Date Sampled: 04/13/21 00:00  
Percent Solids: N/A

ESS Laboratory Work Order: 21D0382  
ESS Laboratory Sample ID: 21D0382-01  
Sample Matrix: Soil  
Units: mg/L

Extraction Method: 3005A TCLP

**1311 TCLP Metals**

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>TCLP Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>I/V</u>	<u>F/V</u>	<u>Batch</u>
Lead	0.093 (0.050)		1311/6010C		1	KJK	04/14/21 21:36	50	50	DD11338



*CERTIFICATE OF ANALYSIS*

Client Name: United Retek  
Client Project ID: Rivers Edge Wayland MA  
Client Sample ID: 1 Cell-E7  
Date Sampled: 04/13/21 00:00  
Percent Solids: N/A  
Initial Volume: 100  
Final Volume: 2000  
Extraction Method: 1311

ESS Laboratory Work Order: 21D0382  
ESS Laboratory Sample ID: 21D0382-01  
Sample Matrix: Soil  
Units: °C  
Analyst: NAR  
Prepared: 4/13/21 19:35

**TCLP Extraction by 1311**

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Batch</u>
Temperature (Min C)	20.1 (N/A)		1311		1	NAR	04/14/21 11:40	DD11341
Temperature (Max C)	21.9 (N/A)		1311		1	NAR	04/14/21 11:40	DD11341
Temperature (Range)	Temperature is not within 23 +/-2 °C. (N/A)							



*CERTIFICATE OF ANALYSIS*

Client Name: United Retek  
Client Project ID: Rivers Edge Wayland MA  
Client Sample ID: 2 Cell-E7  
Date Sampled: 04/13/21 00:00  
Percent Solids: N/A

ESS Laboratory Work Order: 21D0382  
ESS Laboratory Sample ID: 21D0382-02  
Sample Matrix: Soil  
Units: mg/L

Extraction Method: 3005A TCLP

**1311 TCLP Metals**

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>TCLP Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>I/V</u>	<u>F/V</u>	<u>Batch</u>
Lead	ND (0.050)		1311/6010C		1	KJK	04/14/21 21:38	50	50	DD11338



*CERTIFICATE OF ANALYSIS*

Client Name: United Retek  
Client Project ID: Rivers Edge Wayland MA  
Client Sample ID: 2 Cell-E7  
Date Sampled: 04/13/21 00:00  
Percent Solids: N/A  
Initial Volume: 100  
Final Volume: 2000  
Extraction Method: 1311

ESS Laboratory Work Order: 21D0382  
ESS Laboratory Sample ID: 21D0382-02  
Sample Matrix: Soil  
Units: °C  
Analyst: NAR  
Prepared: 4/13/21 19:35

**TCLP Extraction by 1311**

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Batch</u>
Temperature (Min C)	20.1 (N/A)		1311		1	NAR	04/14/21 11:40	DD11341
Temperature (Max C)	21.9 (N/A)		1311		1	NAR	04/14/21 11:40	DD11341
Temperature (Range)	Temperature is not within 23 +/-2 °C. (N/A)							



*CERTIFICATE OF ANALYSIS*

Client Name: United Retek  
Client Project ID: Rivers Edge Wayland MA

ESS Laboratory Work Order: 21D0382

**Quality Control Data**

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
<b>1311 TCLP Metals</b>										
<b>Batch DD11338 - 3005A_TCLP</b>										
<b>Blank</b>										
Lead	ND	0.050	mg/L							
<b>Blank</b>										
Lead	ND	0.050	mg/L							
<b>LCS</b>										
Lead	0.497	0.050	mg/L	0.5000		99	80-120			
<b>LCS Dup</b>										
Lead	0.496	0.050	mg/L	0.5000		99	80-120	0.2	20	



*CERTIFICATE OF ANALYSIS*

Client Name: United Retek  
Client Project ID: Rivers Edge Wayland MA

ESS Laboratory Work Order: 21D0382

**Notes and Definitions**

- Z18 Temperature is not within 23 +/-2 °C.
- U Analyte included in the analysis, but not detected
- ND Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference
- MDL Method Detection Limit
- MRL Method Reporting Limit
- LOD Limit of Detection
- LOQ Limit of Quantitation
- DL Detection Limit
- I/V Initial Volume
- F/V Final Volume
- § Subcontracted analysis; see attached report
- 1 Range result excludes concentrations of surrogates and/or internal standards eluting in that range.
- 2 Range result excludes concentrations of target analytes eluting in that range.
- 3 Range result excludes the concentration of the C9-C10 aromatic range.
- Avg Results reported as a mathematical average.
- NR No Recovery
- [CALC] Calculated Analyte
- SUB Subcontracted analysis; see attached report
- RL Reporting Limit
- EDL Estimated Detection Limit
- MF Membrane Filtration
- MPN Most Probably Number
- TNTC Too numerous to Count
- CFU Colony Forming Units





*CERTIFICATE OF ANALYSIS*

Client Name: United Retek  
Client Project ID: Rivers Edge Wayland MA

ESS Laboratory Work Order: 21D0382

**ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS**

**ENVIRONMENTAL**

Rhode Island Potable and Non Potable Water: LAI00179

<http://www.health.ri.gov/find/labs/analytical/ESS.pdf>

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750

[http://www.ct.gov/dph/lib/dph/environmental\\_health/environmental\\_laboratories/pdf/OutofStateCommercialLaboratories.pdf](http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf)

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002

<http://www.maine.gov/dhhs/meecd/environmental-health/dwp/partners/labCert.shtml>

Massachusetts Potable and Non Potable Water: M-RI002

<http://public.dep.state.ma.us/Labcert/Labcert.aspx>

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424

<http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm>

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313

<http://www.wadsworth.org/labcert/elap/comm.html>

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006

[http://datamine2.state.nj.us/DEP\\_OPRA/OpraMain/pi\\_main?mode=pi\\_by\\_site&sort\\_order=PI\\_NAMEA&Select+a+Site:=58715](http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715)

United States Department of Agriculture Soil Permit: P330-12-00139

Pennsylvania: 68-01752

<http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx>

## ESS Laboratory Sample and Cooler Receipt Checklist

Client: United Retek - TB

ESS Project ID: 21D0382

Shipped/Delivered Via: ESS Courier

Date Received: 4/13/2021

Project Due Date: 4/15/2021

Days for Project: 2 Day

- 1. Air bill manifest present?  No  
Air No.: NA
- 2. Were custody seals present?  No
- 3. Is radiation count <100 CPM?  Yes
- 4. Is a Cooler Present?  Yes  
Temp: 1.2 Iced with: Ice
- 5. Was COC signed and dated by client?  Yes

- 6. Does COC match bottles?  Yes
- 7. Is COC complete and correct?  Yes
- 8. Were samples received intact?  Yes
- 9. Were labs informed about **short holds & rushes**?  Yes /  No /  NA
- 10. Were any analyses received outside of hold time?  Yes /  No

- 11. Any Subcontracting needed?  Yes /  No  
ESS Sample IDs: \_\_\_\_\_  
Analysis: \_\_\_\_\_  
TAT: \_\_\_\_\_

- 12. Were VOAs received?  Yes /  No  
a. Air bubbles in aqueous VOAs?  Yes /  No  
b. Does methanol cover soil completely?  Yes /  No /  NA

- 13. Are the samples properly preserved?  Yes /  No  
a. If metals preserved upon receipt: Date: \_\_\_\_\_ Time: \_\_\_\_\_ By: \_\_\_\_\_  
b. Low Level VOA vials frozen: Date: \_\_\_\_\_ Time: \_\_\_\_\_ By: \_\_\_\_\_

Sample Receiving Notes:

- 14. Was there a need to contact Project Manager?  Yes /  No  
a. Was there a need to contact the client?  Yes /  No  
Who was contacted? \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_ By: \_\_\_\_\_

Sample Number	Container ID	Proper Container	Air Bubbles Present	Sufficient Volume	Container Type	Preservative	Record pH (Cyanide and 608 Pesticides)
1	153099	Yes	N/A	Yes	8 oz jar	NP	
2	153100	Yes	N/A	Yes	8 oz jar	NP	

**2nd Review**

- Were all containers scanned into storage/lab?
- Are barcode labels on correct containers?
- Are all Flashpoint stickers attached/container ID # circled?
- Are all Hex Chrome stickers attached?
- Are all QC stickers attached?
- Are VOA stickers attached if bubbles noted?

Initials: TD  
 Yes /  No  
 Yes /  No /  NA  
 Yes /  No /  NA  
 Yes /  No /  NA  
 Yes /  No /  NA

Completed By: [Signature]  
 Reviewed By: [Signature]

Date & Time: 4/13/21 1819  
 Date & Time: 4/13/21 1835



185 Frances Avenue  
 Cranston, RI 02921  
 Phone: 401-461-7181  
 Fax: 401-461-4486  
 www.esslaboratory.com

**CHAIN OF CUSTODY**

ESS Lab # **Z1DD382** Page **1** of **1**  
 ELECTRONIC DELIVERABLES (Final Reports are PDF)  
 Limit Checker     State Forms     EQulS  
 Excel     Hard Copy     Enviro Data  
 CLP-Like Package     Other (Specify) →

Turn Time  >5    5    4    3    2    1    Same Day  
 Regulatory State: \_\_\_\_\_ Criteria: \_\_\_\_\_  
 Is this project for any of the following?:  
 CT RCP     MA MCP     RGP     Permit     401 WQ

CLIENT INFORMATION				PROJECT INFORMATION				REQUESTED ANALYSES										Total Number of Bottles
Client: <b>UNITED RETEK CORP.</b>				Project Name: <b>RIVERS EDGE</b>				Client acknowledges that sampling is compliant with all EPA / State regulatory programs										
Address: <b>47 SOUTH MAPLE ST. BELLINGHAM MA 02019</b>				Project Location: <b>WAYLAND</b>														
Phone: <b>508-478-5500</b>				Project Number: <b>21-08</b>														
Email Distribution List: <b>EDDIE@UNITED</b> <b>RYAN@RETEK.COM</b> <b>STEVE@UNITEDRETEK.COM</b>				Project Manager: <b>N/A</b>														
				Bill to: <b>UNITEDRETEK</b>														
				PO#: <b>N/A</b>														
				Quote#: <b>N/A</b>														
ESS Lab ID	Collection Date	Collection Time	Sample Type	Sample Matrix	Sample ID													
<b>1</b>	<b>4-13-21</b>	<b>AM</b>	<b>C</b>	<b>S</b>	<b>#1 CELL-ET</b>													
<b>2</b>					<b>#2</b>													
Container Type: AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubiter J-Jar O-Other P-Poly S-Sterile V-Vial																		
Container Volume: 1-100 mL 2-2.5 gal 3-250 mL 4-300 mL 5-500 mL 6-1L 7-VOA 8-2 oz 9-4 oz 10-8 oz 11-Other*																		
Preservation Code: 1-Non Preserved 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-Methanol 7-Na2S2O3 8-ZnAc, NaOH 9-NH4Cl 10-DI H2O 11-Other*																		
Sampled by:						Chain needs to be filled out neatly and completely for on time delivery.												
Laboratory Use Only		Cooler Temperature (°C): <b>6.2</b> <b>1cc</b>				Comments: * Please specify "Other" preservative and containers types in this space					All samples submitted are subject to ESS Laboratory's payment terms and conditions.					Dissolved Filtration <input type="checkbox"/> Lab Filter		
Relinquished by (Signature)		Date	Time	Received by (Signature)		Date	Time	Relinquished by (Signature)		Date	Time	Received by (Signature)						
<i>[Signature]</i>		<b>4-13-21</b>	<b>AM</b>	<i>[Signature]</i>		<b>4/13/21</b>	<b>11:09</b>	<i>[Signature]</i>		<b>4/13/21</b>	<b>18:05</b>	<i>[Signature]</i>						
Relinquished by (Signature)		Date	Time	Received by (Signature)		Date	Time	Relinquished by (Signature)		Date	Time	Received by (Signature)						

## CERTIFICATE OF ANALYSIS

Steve Winters  
United Retek  
47 South Maple Street  
Bellingham, MA 02019

**RE: Rivers Edge Wayland MA (21-08)**  
**ESS Laboratory Work Order Number: 21D0382**

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.



Laurel Stoddard  
Laboratory Director

**REVIEWED**

By ESS Laboratory at 12:35 pm, Apr 15, 2021

**Analytical Summary**

The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

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*CERTIFICATE OF ANALYSIS*

Client Name: United Retek  
Client Project ID: Rivers Edge Wayland MA

ESS Laboratory Work Order: 21D0382

**SAMPLE RECEIPT**

The following samples were received on April 13, 2021 for the analyses specified on the enclosed Chain of Custody Record.

<b>Lab Number</b>	<b>Sample Name</b>	<b>Matrix</b>	<b>Analysis</b>
21D0382-01	1 Cell-E7	Soil	1311, 1311/6010C
21D0382-02	2 Cell-E7	Soil	1311, 1311/6010C



CERTIFICATE OF ANALYSIS

Client Name: United Retek  
Client Project ID: Rivers Edge Wayland MA

ESS Laboratory Work Order: 21D0382

**PROJECT NARRATIVE**

**No unusual observations noted.**

**End of Project Narrative.**

**DATA USABILITY LINKS**

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[Volatile Organics Internal Standard Information](#)

[Volatile Organics Surrogate Information](#)

[EPH and VPH Alkane Lists](#)



*CERTIFICATE OF ANALYSIS*

Client Name: United Retek  
Client Project ID: Rivers Edge Wayland MA

ESS Laboratory Work Order: 21D0382

**CURRENT SW-846 METHODOLOGY VERSIONS**

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- 6010C - ICP
- 6020A - ICP MS
- 7010 - Graphite Furnace
- 7196A - Hexavalent Chromium
- 7470A - Aqueous Mercury
- 7471B - Solid Mercury
- 8011 - EDB/DBCP/TCP
- 8015C - GRO/DRO
- 8081B - Pesticides
- 8082A - PCB
- 8100M - TPH
- 8151A - Herbicides
- 8260B - VOA
- 8270D - SVOA
- 8270D SIM - SVOA Low Level
- 9014 - Cyanide
- 9038 - Sulfate
- 9040C - Aqueous pH
- 9045D - Solid pH (Corrosivity)
- 9050A - Specific Conductance
- 9056A - Anions (IC)
- 9060A - TOC
- 9095B - Paint Filter
- MADEP 04-1.1 - EPH
- MADEP 18-2.1 - VPH

**Prep Methods**

- 3005A - Aqueous ICP Digestion
- 3020A - Aqueous Graphite Furnace / ICP MS Digestion
- 3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
- 3060A - Solid Hexavalent Chromium Digestion
- 3510C - Separatory Funnel Extraction
- 3520C - Liquid / Liquid Extraction
- 3540C - Manual Soxhlet Extraction
- 3541 - Automated Soxhlet Extraction
- 3546 - Microwave Extraction
- 3580A - Waste Dilution
- 5030B - Aqueous Purge and Trap
- 5030C - Aqueous Purge and Trap
- 5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.



*CERTIFICATE OF ANALYSIS*

Client Name: United Retek  
Client Project ID: Rivers Edge Wayland MA  
Client Sample ID: 1 Cell-E7  
Date Sampled: 04/13/21 00:00  
Percent Solids: N/A

ESS Laboratory Work Order: 21D0382  
ESS Laboratory Sample ID: 21D0382-01  
Sample Matrix: Soil  
Units: mg/L

Extraction Method: 3005A TCLP

**1311 TCLP Metals**

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>TCLP Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>I/V</u>	<u>F/V</u>	<u>Batch</u>
Lead	0.093 (0.050)		1311/6010C		1	KJK	04/14/21 21:36	50	50	DD11338





*CERTIFICATE OF ANALYSIS*

Client Name: United Retek  
Client Project ID: Rivers Edge Wayland MA  
Client Sample ID: 1 Cell-E7  
Date Sampled: 04/13/21 00:00  
Percent Solids: N/A  
Initial Volume: 100  
Final Volume: 2000  
Extraction Method: 1311

ESS Laboratory Work Order: 21D0382  
ESS Laboratory Sample ID: 21D0382-01  
Sample Matrix: Soil  
Units: °C  
Analyst: NAR  
Prepared: 4/13/21 19:35

**TCLP Extraction by 1311**

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Batch</u>
Temperature (Min C)	20.1 (N/A)		1311		1	NAR	04/14/21 11:40	DD11341
Temperature (Max C)	21.9 (N/A)		1311		1	NAR	04/14/21 11:40	DD11341
Temperature (Range)	Temperature is not within 23 +/-2 °C. (N/A)							



*CERTIFICATE OF ANALYSIS*

Client Name: United Retek  
Client Project ID: Rivers Edge Wayland MA  
Client Sample ID: 2 Cell-E7  
Date Sampled: 04/13/21 00:00  
Percent Solids: N/A

ESS Laboratory Work Order: 21D0382  
ESS Laboratory Sample ID: 21D0382-02  
Sample Matrix: Soil  
Units: mg/L

Extraction Method: 3005A TCLP

**1311 TCLP Metals**

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>TCLP Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>I/V</u>	<u>F/V</u>	<u>Batch</u>
Lead	ND (0.050)		1311/6010C		1	KJK	04/14/21 21:38	50	50	DD11338



*CERTIFICATE OF ANALYSIS*

Client Name: United Retek  
Client Project ID: Rivers Edge Wayland MA  
Client Sample ID: 2 Cell-E7  
Date Sampled: 04/13/21 00:00  
Percent Solids: N/A  
Initial Volume: 100  
Final Volume: 2000  
Extraction Method: 1311

ESS Laboratory Work Order: 21D0382  
ESS Laboratory Sample ID: 21D0382-02  
Sample Matrix: Soil  
Units: °C  
Analyst: NAR  
Prepared: 4/13/21 19:35

**TCLP Extraction by 1311**

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Batch</u>
Temperature (Min C)	20.1 (N/A)		1311		1	NAR	04/14/21 11:40	DD11341
Temperature (Max C)	21.9 (N/A)		1311		1	NAR	04/14/21 11:40	DD11341
Temperature (Range)	Temperature is not within 23 +/-2 °C. (N/A)							



*CERTIFICATE OF ANALYSIS*

Client Name: United Retek  
Client Project ID: Rivers Edge Wayland MA

ESS Laboratory Work Order: 21D0382

**Quality Control Data**

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
<b>1311 TCLP Metals</b>										
<b>Batch DD11338 - 3005A_TCLP</b>										
<b>Blank</b>										
Lead	ND	0.050	mg/L							
<b>Blank</b>										
Lead	ND	0.050	mg/L							
<b>LCS</b>										
Lead	0.497	0.050	mg/L	0.5000		99	80-120			
<b>LCS Dup</b>										
Lead	0.496	0.050	mg/L	0.5000		99	80-120	0.2	20	



*CERTIFICATE OF ANALYSIS*

Client Name: United Retek  
Client Project ID: Rivers Edge Wayland MA

ESS Laboratory Work Order: 21D0382

**Notes and Definitions**

- Z18 Temperature is not within 23 +/- 2 °C.
- U Analyte included in the analysis, but not detected
- ND Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference
- MDL Method Detection Limit
- MRL Method Reporting Limit
- LOD Limit of Detection
- LOQ Limit of Quantitation
- DL Detection Limit
- I/V Initial Volume
- F/V Final Volume
- § Subcontracted analysis; see attached report
- 1 Range result excludes concentrations of surrogates and/or internal standards eluting in that range.
- 2 Range result excludes concentrations of target analytes eluting in that range.
- 3 Range result excludes the concentration of the C9-C10 aromatic range.
- Avg Results reported as a mathematical average.
- NR No Recovery
- [CALC] Calculated Analyte
- SUB Subcontracted analysis; see attached report
- RL Reporting Limit
- EDL Estimated Detection Limit
- MF Membrane Filtration
- MPN Most Probably Number
- TNTC Too numerous to Count
- CFU Colony Forming Units



*CERTIFICATE OF ANALYSIS*

Client Name: United Retek  
Client Project ID: Rivers Edge Wayland MA

ESS Laboratory Work Order: 21D0382

**ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS**

**ENVIRONMENTAL**

Rhode Island Potable and Non Potable Water: LAI00179

<http://www.health.ri.gov/find/labs/analytical/ESS.pdf>

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750

[http://www.ct.gov/dph/lib/dph/environmental\\_health/environmental\\_laboratories/pdf/OutofStateCommercialLaboratories.pdf](http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf)

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002

<http://www.maine.gov/dhhs/meecd/environmental-health/dwp/partners/labCert.shtml>

Massachusetts Potable and Non Potable Water: M-RI002

<http://public.dep.state.ma.us/Labcert/Labcert.aspx>

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424

<http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm>

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313

<http://www.wadsworth.org/labcert/elap/comm.html>

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006

[http://datamine2.state.nj.us/DEP\\_OPRA/OpraMain/pi\\_main?mode=pi\\_by\\_site&sort\\_order=PI\\_NAMEA&Select+a+Site:=58715](http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715)

United States Department of Agriculture Soil Permit: P330-12-00139

Pennsylvania: 68-01752

<http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx>

## ESS Laboratory Sample and Cooler Receipt Checklist

Client: United Retek - TB

ESS Project ID: 21D0382

Shipped/Delivered Via: ESS Courier

Date Received: 4/13/2021

Project Due Date: 4/15/2021

Days for Project: 2 Day

1. Air bill manifest present?  No  
Air No.: NA
2. Were custody seals present?  No
3. Is radiation count <100 CPM?  Yes
4. Is a Cooler Present?  Yes  
Temp: 1.2 Iced with: Ice
5. Was COC signed and dated by client?  Yes

6. Does COC match bottles?  Yes
7. Is COC complete and correct?  Yes
8. Were samples received intact?  Yes
9. Were labs informed about **short holds & rushes**?  Yes /  No /  NA
10. Were any analyses received outside of hold time?  Yes /  No

11. Any Subcontracting needed?  Yes /  No  
ESS Sample IDs: \_\_\_\_\_  
Analysis: \_\_\_\_\_  
TAT: \_\_\_\_\_

12. Were VOAs received?  Yes /  No  
a. Air bubbles in aqueous VOAs?  Yes /  No  
b. Does methanol cover soil completely?  Yes /  No /  NA

13. Are the samples properly preserved?  Yes /  No  
a. If metals preserved upon receipt: Date: \_\_\_\_\_ Time: \_\_\_\_\_ By: \_\_\_\_\_  
b. Low Level VOA vials frozen: Date: \_\_\_\_\_ Time: \_\_\_\_\_ By: \_\_\_\_\_

Sample Receiving Notes:

14. Was there a need to contact Project Manager?  Yes /  No  
a. Was there a need to contact the client?  Yes /  No  
Who was contacted? \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_ By: \_\_\_\_\_

Sample Number	Container ID	Proper Container	Air Bubbles Present	Sufficient Volume	Container Type	Preservative	Record pH (Cyanide and 608 Pesticides)
1	153099	Yes	N/A	Yes	8 oz jar	NP	
2	153100	Yes	N/A	Yes	8 oz jar	NP	

**2nd Review**

- Were all containers scanned into storage/lab? Initials TD
- Are barcode labels on correct containers?  Yes /  No
- Are all Flashpoint stickers attached/container ID # circled?  Yes /  No /  NA
- Are all Hex Chrome stickers attached?  Yes /  No /  NA
- Are all QC stickers attached?  Yes /  No /  NA
- Are VOA stickers attached if bubbles noted?  Yes /  No /  NA

Completed By: [Signature]  
Reviewed By: [Signature]

Date & Time: 4/13/21 1819  
Date & Time: 4/13/21 1835



185 Frances Avenue  
Cranston, RI 02921  
Phone: 401-461-7181  
Fax: 401-461-4486  
www.esslaboratory.com

CHAIN OF CUSTODY

ESS Lab # Z10D382 Page 1 of 1

Turn Time  >5  5  4  3  2  1  Same Day

Regulatory State: Criteria:

Is this project for any of the following?:

CT RCP  MA MCP  RGP  Permit  401 WQ

ELECTRONIC DELIVERABLES (Final Reports are PDF)  
 Limit Checker  State Forms  EQulS  
 Excel  Hard Copy  Enviro Data  
 CLP-Like Package  Other (Specify) →

CLIENT INFORMATION				PROJECT INFORMATION			REQUESTED ANALYSES										Total Number of Bottles
Client: UNITED RETEK CORP.	Project Name: RIVERS EDGE		Client acknowledges that sampling is compliant with all EPA / State regulatory programs														
Address: 47 SOUTH MAPLE ST. BELLINGHAM MA 02019	Project Location: WAYLAND	Project Number: 21-08	Project Manager: N/A														
Phone: 508-478-5500	Bill to: UNITED RETEK	PO#: N/A	Quote#: N/A														
Email Distribution List: EDDIE@UNITED RYAN@ → RETEK.COM STEVE@UNITED RETEK.COM																	
ESS Lab ID	Collection Date	Collection Time	Sample Type	Sample Matrix	Sample ID												
1	4-13-21	AM	C	S	#1 CELL-ET												
2					#2												
Container Type:	AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubtainer J-Jar O-Other P-Poly S-Sterile V-Vial					AG											
Container Volume:	1-100 mL 2-2.5 gal 3-250 mL 4-300 mL 5-500 mL 6-1L 7-VOA 8-2 oz 9-4 oz 10-8 oz 11-Other*					10											
Preservation Code:	1-Non Preserved 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-Methanol 7-Na2S2O3 8-ZnAce, NaOH 9-NH4Cl 10-DI H2O 11-Other*																
Sampled by :					Chain needs to be filled out neatly and completely for on time delivery.												
Laboratory Use Only		Comments: * Please specify "Other" preservative and containers types in this space					All samples submitted are subject to ESS Laboratory's payment terms and conditions.					Dissolved Filtration <input type="checkbox"/> Lab Filter					
Cooler Temperature (°C): 6.2 ice																	
Relinquished by (Signature)	Date	Time	Received by (Signature)	Date	Time	Received by (Signature)	Date	Time	Received by (Signature)								
<i>Ryan Brown</i>	4-13-21	AM	<i>Steve</i> 11:09	4/13/21		<i>Ryan Brown</i>	4/13/21	18:05	<i>Michael Davis</i>								
Relinquished by (Signature)	Date	Time	Received by (Signature)	Date	Time	Received by (Signature)	Date	Time	Received by (Signature)								



April 20, 2021

Kristen Sarson  
Vertex Engineering - Boston  
100 North Washington St. Suite 302  
Boston, MA 02114

Project Location: 434 Boston Post Rd  
Client Job Number:  
Project Number: 67404  
Laboratory Work Order Number: 21D0510

Enclosed are results of analyses for samples received by the laboratory on April 9, 2021. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jessica L. Hoffman  
Project Manager

## Table of Contents

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

Vertex Engineering - Boston  
100 North Washington St. Suite 302  
Boston, MA 02114  
ATTN: Kristen Sarson

REPORT DATE: 4/20/2021

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 67404

**ANALYTICAL SUMMARY**

---

WORK ORDER NUMBER: 21D0510

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

PROJECT LOCATION: 434 Boston Post Rd

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
TP-D1-Conf	21D0510-01	Soil		SM 2540G SW-846 8270D-E	
TP-D1-Conf	21D0510-02	Soil		SM 2540G SW-846 8270D-E	

**CASE NARRATIVE SUMMARY**

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

For method 8270E, only PAHs were requested and reported.

**SW-846 8270D-E**

**Qualifications:**

**RL-08**

Elevated reporting limit due to sample matrix interference. MA CAM reporting limit not met.

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

21D0510-01[TP-D1-Conf], 21D0510-02[TP-D1-Conf]

The results of analyses reported only relate to samples submitted to Con-Test, a Pace 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  
Technical Representative

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

Project Location: 434 Boston Post Rd

Sample Description:

Work Order: 21D0510

Date Received: 4/9/2021

Field Sample #: TP-D1-Conf

Sampled: 4/9/2021 08:25

Sample ID: 21D0510-01

Sample Matrix: Soil

Sample Flags: RL-08

**Semivolatile Organic Compounds by GC/MS**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.91	mg/Kg dry	5		SW-846 8270D-E	4/19/21	4/20/21 9:20	IMR
Acenaphthylene	ND	0.91	mg/Kg dry	5		SW-846 8270D-E	4/19/21	4/20/21 9:20	IMR
Anthracene	ND	0.91	mg/Kg dry	5		SW-846 8270D-E	4/19/21	4/20/21 9:20	IMR
Benzo(a)anthracene	1.2	0.91	mg/Kg dry	5		SW-846 8270D-E	4/19/21	4/20/21 9:20	IMR
Benzo(a)pyrene	1.3	0.91	mg/Kg dry	5		SW-846 8270D-E	4/19/21	4/20/21 9:20	IMR
Benzo(b)fluoranthene	1.4	0.91	mg/Kg dry	5		SW-846 8270D-E	4/19/21	4/20/21 9:20	IMR
Benzo(g,h,i)perylene	1.0	0.91	mg/Kg dry	5		SW-846 8270D-E	4/19/21	4/20/21 9:20	IMR
Benzo(k)fluoranthene	ND	0.91	mg/Kg dry	5		SW-846 8270D-E	4/19/21	4/20/21 9:20	IMR
Chrysene	1.2	0.91	mg/Kg dry	5		SW-846 8270D-E	4/19/21	4/20/21 9:20	IMR
Dibenz(a,h)anthracene	ND	0.91	mg/Kg dry	5		SW-846 8270D-E	4/19/21	4/20/21 9:20	IMR
Fluoranthene	1.9	0.91	mg/Kg dry	5		SW-846 8270D-E	4/19/21	4/20/21 9:20	IMR
Fluorene	ND	0.91	mg/Kg dry	5		SW-846 8270D-E	4/19/21	4/20/21 9:20	IMR
Indeno(1,2,3-cd)pyrene	1.0	0.91	mg/Kg dry	5		SW-846 8270D-E	4/19/21	4/20/21 9:20	IMR
2-Methylnaphthalene	ND	0.91	mg/Kg dry	5		SW-846 8270D-E	4/19/21	4/20/21 9:20	IMR
Naphthalene	ND	0.91	mg/Kg dry	5		SW-846 8270D-E	4/19/21	4/20/21 9:20	IMR
Phenanthrene	0.93	0.91	mg/Kg dry	5		SW-846 8270D-E	4/19/21	4/20/21 9:20	IMR
Pyrene	2.6	0.91	mg/Kg dry	5		SW-846 8270D-E	4/19/21	4/20/21 9:20	IMR
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Nitrobenzene-d5		76.1	30-130					4/20/21 9:20	
2-Fluorobiphenyl		70.2	30-130					4/20/21 9:20	
p-Terphenyl-d14		90.7	30-130					4/20/21 9:20	

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

Project Location: 434 Boston Post Rd

Sample Description:

Work Order: 21D0510

Date Received: 4/9/2021

**Field Sample #: TP-D1-Conf**

Sampled: 4/9/2021 08:25

**Sample ID: 21D0510-01**

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	93.6		% Wt	1		SM 2540G	4/19/21	4/19/21 19:43	YS

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

Project Location: 434 Boston Post Rd

Sample Description:

Work Order: 21D0510

Date Received: 4/9/2021

Field Sample #: TP-D1-Conf

Sampled: 4/9/2021 08:30

Sample ID: 21D0510-02

Sample Matrix: Soil

Sample Flags: RL-08

**Semivolatile Organic Compounds by GC/MS**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.95	mg/Kg dry	5		SW-846 8270D-E	4/19/21	4/20/21 9:44	IMR
Acenaphthylene	ND	0.95	mg/Kg dry	5		SW-846 8270D-E	4/19/21	4/20/21 9:44	IMR
Anthracene	ND	0.95	mg/Kg dry	5		SW-846 8270D-E	4/19/21	4/20/21 9:44	IMR
Benzo(a)anthracene	1.2	0.95	mg/Kg dry	5		SW-846 8270D-E	4/19/21	4/20/21 9:44	IMR
Benzo(a)pyrene	1.2	0.95	mg/Kg dry	5		SW-846 8270D-E	4/19/21	4/20/21 9:44	IMR
Benzo(b)fluoranthene	1.4	0.95	mg/Kg dry	5		SW-846 8270D-E	4/19/21	4/20/21 9:44	IMR
Benzo(g,h,i)perylene	ND	0.95	mg/Kg dry	5		SW-846 8270D-E	4/19/21	4/20/21 9:44	IMR
Benzo(k)fluoranthene	ND	0.95	mg/Kg dry	5		SW-846 8270D-E	4/19/21	4/20/21 9:44	IMR
Chrysene	1.2	0.95	mg/Kg dry	5		SW-846 8270D-E	4/19/21	4/20/21 9:44	IMR
Dibenz(a,h)anthracene	ND	0.95	mg/Kg dry	5		SW-846 8270D-E	4/19/21	4/20/21 9:44	IMR
Fluoranthene	1.8	0.95	mg/Kg dry	5		SW-846 8270D-E	4/19/21	4/20/21 9:44	IMR
Fluorene	ND	0.95	mg/Kg dry	5		SW-846 8270D-E	4/19/21	4/20/21 9:44	IMR
Indeno(1,2,3-cd)pyrene	ND	0.95	mg/Kg dry	5		SW-846 8270D-E	4/19/21	4/20/21 9:44	IMR
2-Methylnaphthalene	ND	0.95	mg/Kg dry	5		SW-846 8270D-E	4/19/21	4/20/21 9:44	IMR
Naphthalene	ND	0.95	mg/Kg dry	5		SW-846 8270D-E	4/19/21	4/20/21 9:44	IMR
Phenanthrene	ND	0.95	mg/Kg dry	5		SW-846 8270D-E	4/19/21	4/20/21 9:44	IMR
Pyrene	2.5	0.95	mg/Kg dry	5		SW-846 8270D-E	4/19/21	4/20/21 9:44	IMR
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Nitrobenzene-d5		72.6	30-130					4/20/21 9:44	
2-Fluorobiphenyl		70.0	30-130					4/20/21 9:44	
p-Terphenyl-d14		96.3	30-130					4/20/21 9:44	

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Project Location: 434 Boston Post Rd

Sample Description:

Work Order: 21D0510

Date Received: 4/9/2021

**Field Sample #: TP-D1-Conf**

Sampled: 4/9/2021 08:30

**Sample ID: 21D0510-02**

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	89.5		% Wt	1		SM 2540G	4/19/21	4/19/21 19:43	YS



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

<b>Lab Number [Field ID]</b>	<b>Batch</b>	<b>Date</b>
21D0510-01 [TP-D1-Conf]	B280421	04/19/21
21D0510-02 [TP-D1-Conf]	B280421	04/19/21

**Prep Method: SW-846 3546    Analytical Method: SW-846 8270D-E**

<b>Lab Number [Field ID]</b>	<b>Batch</b>	<b>Initial [g]</b>	<b>Final [mL]</b>	<b>Date</b>
21D0510-01 [TP-D1-Conf]	B280401	30.0	1.00	04/19/21
21D0510-02 [TP-D1-Conf]	B280401	30.0	1.00	04/19/21

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

**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
<b>Batch B280401 - SW-846 3546</b>										
<b>Blank (B280401-BLK1)</b>										
Prepared: 04/19/21 Analyzed: 04/20/21										
Acenaphthene	ND	0.17	mg/Kg wet							
Acenaphthylene	ND	0.17	mg/Kg wet							
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							
Benzo(k)fluoranthene	ND	0.17	mg/Kg wet							
Chrysene	ND	0.17	mg/Kg wet							
Dibenz(a,h)anthracene	ND	0.17	mg/Kg wet							
Fluoranthene	ND	0.17	mg/Kg wet							
Fluorene	ND	0.17	mg/Kg wet							
Indeno(1,2,3-cd)pyrene	ND	0.17	mg/Kg wet							
2-Methylnaphthalene	ND	0.17	mg/Kg wet							
Naphthalene	ND	0.17	mg/Kg wet							
Phenanthrene	ND	0.17	mg/Kg wet							
Pyrene	ND	0.17	mg/Kg wet							
Surrogate: Nitrobenzene-d5	2.49		mg/Kg wet	3.33		74.8	30-130			
Surrogate: 2-Fluorobiphenyl	2.32		mg/Kg wet	3.33		69.8	30-130			
Surrogate: p-Terphenyl-d14	3.22		mg/Kg wet	3.33		96.5	30-130			
<b>LCS (B280401-BS1)</b>										
Prepared: 04/19/21 Analyzed: 04/20/21										
Acenaphthene	1.22	0.17	mg/Kg wet	1.67		73.3	40-140			
Acenaphthylene	1.22	0.17	mg/Kg wet	1.67		72.9	40-140			
Anthracene	1.33	0.17	mg/Kg wet	1.67		79.9	40-140			
Benzo(a)anthracene	1.42	0.17	mg/Kg wet	1.67		85.3	40-140			
Benzo(a)pyrene	1.29	0.17	mg/Kg wet	1.67		77.5	40-140			
Benzo(b)fluoranthene	1.38	0.17	mg/Kg wet	1.67		82.7	40-140			
Benzo(g,h,i)perylene	1.39	0.17	mg/Kg wet	1.67		83.7	40-140			
Benzo(k)fluoranthene	1.37	0.17	mg/Kg wet	1.67		82.4	40-140			
Chrysene	1.42	0.17	mg/Kg wet	1.67		85.1	40-140			
Dibenz(a,h)anthracene	1.32	0.17	mg/Kg wet	1.67		79.0	40-140			
Fluoranthene	1.29	0.17	mg/Kg wet	1.67		77.4	40-140			
Fluorene	1.29	0.17	mg/Kg wet	1.67		77.5	40-140			
Indeno(1,2,3-cd)pyrene	1.34	0.17	mg/Kg wet	1.67		80.4	40-140			
2-Methylnaphthalene	1.36	0.17	mg/Kg wet	1.67		81.7	40-140			
Naphthalene	1.13	0.17	mg/Kg wet	1.67		67.8	40-140			
Phenanthrene	1.31	0.17	mg/Kg wet	1.67		78.8	40-140			
Pyrene	1.44	0.17	mg/Kg wet	1.67		86.3	40-140			
Surrogate: Nitrobenzene-d5	2.59		mg/Kg wet	3.33		77.6	30-130			
Surrogate: 2-Fluorobiphenyl	2.57		mg/Kg wet	3.33		77.0	30-130			
Surrogate: p-Terphenyl-d14	3.31		mg/Kg wet	3.33		99.4	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	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B280401 - SW-846 3546</b>										
<b>LCS Dup (B280401-BSD1)</b>										
					Prepared: 04/19/21 Analyzed: 04/20/21					
Acenaphthene	1.19	0.17	mg/Kg wet	1.67		71.7	40-140	2.29	30	
Acenaphthylene	1.18	0.17	mg/Kg wet	1.67		71.0	40-140	2.64	30	
Anthracene	1.32	0.17	mg/Kg wet	1.67		79.4	40-140	0.628	30	
Benzo(a)anthracene	1.39	0.17	mg/Kg wet	1.67		83.6	40-140	1.99	30	
Benzo(a)pyrene	1.27	0.17	mg/Kg wet	1.67		76.0	40-140	1.93	30	
Benzo(b)fluoranthene	1.35	0.17	mg/Kg wet	1.67		81.0	40-140	2.17	30	
Benzo(g,h,i)perylene	1.36	0.17	mg/Kg wet	1.67		81.9	40-140	2.20	30	
Benzo(k)fluoranthene	1.38	0.17	mg/Kg wet	1.67		82.7	40-140	0.315	30	
Chrysene	1.38	0.17	mg/Kg wet	1.67		83.0	40-140	2.50	30	
Dibenz(a,h)anthracene	1.31	0.17	mg/Kg wet	1.67		78.5	40-140	0.711	30	
Fluoranthene	1.28	0.17	mg/Kg wet	1.67		76.8	40-140	0.674	30	
Fluorene	1.26	0.17	mg/Kg wet	1.67		75.5	40-140	2.61	30	
Indeno(1,2,3-cd)pyrene	1.33	0.17	mg/Kg wet	1.67		79.6	40-140	1.02	30	
2-Methylnaphthalene	1.33	0.17	mg/Kg wet	1.67		80.0	40-140	2.05	30	
Naphthalene	1.14	0.17	mg/Kg wet	1.67		68.1	40-140	0.471	30	
Phenanthrene	1.31	0.17	mg/Kg wet	1.67		78.5	40-140	0.382	30	
Pyrene	1.42	0.17	mg/Kg wet	1.67		85.4	40-140	1.00	30	
Surrogate: Nitrobenzene-d5	2.77		mg/Kg wet	3.33		83.2	30-130			
Surrogate: 2-Fluorobiphenyl	2.48		mg/Kg wet	3.33		74.4	30-130			
Surrogate: p-Terphenyl-d14	3.22		mg/Kg wet	3.33		96.7	30-130			

**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.
RL-08	Elevated reporting limit due to sample matrix interference. MA CAM reporting limit not met.

**CERTIFICATIONS**

**Certified Analyses included in this Report**

Analyte	Certifications
<i>SW-846 8270D-E in Soil</i>	
Acenaphthene	CT,NY,NH,ME,NC,VA
Acenaphthylene	CT,NY,NH,ME,NC,VA
Anthracene	CT,NY,NH,ME,NC,VA
Benzo(a)anthracene	CT,NY,NH,ME,NC,VA
Benzo(a)pyrene	CT,NY,NH,ME,NC,VA
Benzo(b)fluoranthene	CT,NY,NH,ME,NC,VA
Benzo(g,h,i)perylene	CT,NY,NH,ME,NC,VA
Benzo(k)fluoranthene	CT,NY,NH,ME,NC,VA
Chrysene	CT,NY,NH,ME,NC,VA
Dibenz(a,h)anthracene	CT,NY,NH,ME,NC,VA
Fluoranthene	CT,NY,NH,ME,NC,VA
Fluorene	CT,NY,NH,ME,NC,VA
Indeno(1,2,3-cd)pyrene	CT,NY,NH,ME,NC,VA
2-Methylnaphthalene	CT,NY,NH,ME,NC,VA
Naphthalene	CT,NY,NH,ME,NC,VA
Phenanthrene	CT,NY,NH,ME,NC,VA
Pyrene	CT,NY,NH,ME,NC,VA

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2021
CT	Connecticut Department of Public Health	PH-0165	12/31/2022
NY	New York State Department of Health	10899 NELAP	04/1/2022
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2022
RI	Rhode Island Department of Health	LAO00112	12/30/2021
NC	North Carolina Div. of Water Quality	652	12/31/2021
NJ	New Jersey DEP	MA007 NELAP	06/30/2021
FL	Florida Department of Health	E871027 NELAP	06/30/2021
VT	Vermont Department of Health Lead Laboratory	LL720741	07/30/2021
ME	State of Maine	MA00100	06/9/2021
VA	Commonwealth of Virginia	460217	12/14/2021
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2021
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2021
NC-DW	North Carolina Department of Health	25703	07/31/2021
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2021
MI	Dept. of Env, Great Lakes, and Energy	9100	09/6/2021

210510



Company Name: **CONTEST LABS, INC.**  
 Address: **22 N Washington St Suite 302**  
 Phone: **781-917-5360**  
 Project Name: **157**  
 Project Location: **434 Boston Post Rd**  
 Project Number: **071424**  
 Project Manager: **KRISTIN SAUSON**  
 Con-Test Quote Name/Number:

Requested Turnaround Time:  7-Day PFAS 10-Day (std)  10-Day  15-Day

Rush-Approval Required:  3-Day  4-Day

Field Filtered:  Lab to Filter

Orthophosphate Samples:  Field Filtered  Lab to Filter

Format: PDF  EXCEL  SOXHLET

Other:  CLP Like Data Pkg Required:

Email To: **KSAUSON@VYKING.COM**

Fax To #:

ANALYSIS REQUESTED

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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Con-Test Work Order #	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE
2	TP-D1-Cont	4/9/21	8:25	Comp	S	S					
	TP-D1-Cont	4/9/21	8:30	Comp	S	S					

Relinquished by: (signature)	Date/Time: 4/9/21
Received by: (signature)	Date/Time: 4/9/21 9:53
Relinquished by: (signature)	Date/Time: 4/9/21 2:16
Received by: (signature)	Date/Time: 4/9/21 2:10
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:

Client Comments:

Special Requirements:

MA MCP Required  MA MCP Certification Form Required  CT RCP Required  RCP Certification Form Required  MA State DWR Required  PWSID #

Project Entity: Government  Federal  City  Municipality 21 J Brownfield  WRTA  MMRA  School  MBTA  Other  Chromatogram  AIHA-LAP, LLC

Disclaimer: Con-Test Labs is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Con Test values your partnership on each project and will try to assist with missing information, but will not be held accountable.

I Have Not Confirmed Sample Container Numbers With Lab Staff Before Relinquishing Over Samples \_\_\_\_\_



**con-test**<sup>®</sup>  
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 Vertex

Received By MA Date 4/9/21 Time 2107

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 # 2 Actual Temp - 6.0  
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 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? F Who was notified? \_\_\_\_\_  
Are there Short Holds? F Who was notified? \_\_\_\_\_

Is there enough Volume? T  
Is there Headspace where applicable? NA 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? NA Acid \_\_\_\_\_ Base \_\_\_\_\_

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-		Flashpoint		Col./Bacteria		2oz Amb/Clear
DI-		Other Glass		Other Plastic		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, a Pace Analytical Laboratory	Project #:	21D0510
Project Location:	434 Boston Post Rd	RTN:	
This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)] 21D0510-01 thru 21D0510-02			
Matrices:	Soil		
<b>CAM Protocol (check all that below)</b>			
8260 VOC CAM II A ( )	7470/7471 Hg CAM III B ( )	MassDEP VPH CAM IV A ( )	8082 PCB CAM V A ( )
			9014 Total Cyanide/PAC CAM VI A ( )
			6860 Perchlorate CAM VIII B ( )
8270 SVOC CAM II B (X)	7010 Metals CAM III C ( )	MassDEP VPH CAM IV C ( )	8081 Pesticides CAM V B ( )
			7196 Hex Cr CAM VI B ( )
			MassDEP APH CAM IX A ( )
6010 Metals CAM III A ( )	6020 Metals CAM III D ( )	MassDEP EPH CAM IV B ( )	8151 Herbicides CAM V C ( )
			8330 Explosives CAM VIII A ( )
			TO-15 VOC CAM IX B ( )
<b>Affirmative response to Questions A through F is required for "Presumptive Certainty" status</b>			
<b>A</b>	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?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>B</b>	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>C</b>	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>D</b>	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?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>E a</b>	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).		<input type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>E b</b>	APH and TO-15 Methods only: Was the complete analyte list reported for each method?		<input type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>F</b>	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)?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>A response to questions G, H and I below is required for "Presumptive Certainty" status</b>			
<b>G</b>	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <sup>1</sup>
<b>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.</b>			
<b>H</b>	Were all QC performance standards specified in the CAM protocol(s) achieved?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>I</b>	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<sup>1</sup> All Negative responses must be addressed in an attached Environmental Laboratory case narrative.			
<b>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.</b>			
Signature:	<u>  Lisa Worthington  </u>	Position:	<u>  Technical Representative  </u>
Printed Name:	<u>  Lisa A. Worthington  </u>	Date:	<u>  04/20/21  </u>



April 19, 2021

Kristen Sarson  
Vertex Engineering - Boston  
100 North Washington St. Suite 302  
Boston, MA 02114

Project Location: Wayland, MA  
Client Job Number:  
Project Number: 67404  
Laboratory Work Order Number: 21D0643

Enclosed are results of analyses for samples received by the laboratory on April 13, 2021. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jessica L. Hoffman  
Project Manager

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

Vertex Engineering - Boston  
100 North Washington St. Suite 302  
Boston, MA 02114  
ATTN: Kristen Sarson

REPORT DATE: 4/19/2021

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 67404

**ANALYTICAL SUMMARY**

---

WORK ORDER NUMBER: 21D0643

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

PROJECT LOCATION: Wayland, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
V-402 (2-4)	21D0643-01	Soil		SM 2540G SW-846 6010D	

**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 Pb was requested and reported.

The results of analyses reported only relate to samples submitted to Con-Test, a Pace 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  
Technical Representative

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

Project Location: Wayland, MA

Sample Description:

Work Order: 21D0643

Date Received: 4/13/2021

Field Sample #: V-402 (2-4)

Sampled: 4/12/2021 08:20

Sample ID: 21D0643-01

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Lead	23	0.54	mg/Kg dry	1		SW-846 6010D	4/15/21	4/18/21 18:15	MJH

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

Project Location: Wayland, MA

Sample Description:

Work Order: 21D0643

Date Received: 4/13/2021

Field Sample #: V-402 (2-4)

Sampled: 4/12/2021 08:20

Sample ID: 21D0643-01

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	93.8		% Wt	1		SM 2540G	4/14/21	4/14/21 16:06	TJO

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

Project Location: Wayland, MA

Sample Description:

Work Order: 21D0643

Date Received: 4/13/2021

Field Sample #: V-402 (2-4)

Sampled: 4/12/2021 08:20

Sample ID: 21D0643-01

Sample Matrix: Soil

**TCLP - Metals Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Lead	0.62	0.10	mg/L	1		SW-846 6010D	4/17/21	4/18/21 17:19	MJH

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

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

Lab Number [Field ID]	Batch	Date
21D0643-01 [V-402 (2-4)]	B280124	04/14/21

**Prep Method: SW-846 3050B    Analytical Method: SW-846 6010D**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
21D0643-01 [V-402 (2-4)]	B280246	1.49	50.0	04/15/21

**Prep Method: SW-846 3010A    Analytical Method: SW-846 6010D**

1000g chates were extracted on 4/16/2021 per SW-846 1311 in Batch B280324

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
21D0643-01 [V-402 (2-4)]	B280361	50.0	50.0	04/17/21



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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
<b>Batch B280246 - SW-846 3050B</b>										
<b>Blank (B280246-BLK1)</b>					Prepared: 04/15/21 Analyzed: 04/18/21					
Lead	ND	0.50	mg/Kg wet							
<b>LCS (B280246-BS1)</b>					Prepared: 04/15/21 Analyzed: 04/18/21					
Lead	138	1.5	mg/Kg wet	140		98.5	82.9-117.1			
<b>LCS Dup (B280246-BSD1)</b>					Prepared: 04/15/21 Analyzed: 04/18/21					
Lead	144	1.5	mg/Kg wet	140		103	82.9-117.1	4.06	30	
<b>Reference (B280246-SRM1) MRL Check</b>					Prepared: 04/15/21 Analyzed: 04/18/21					
Lead	0.468	0.47	mg/Kg wet	0.471		99.5	80-120			



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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 B280124 - % Solids**

**Duplicate (B280124-DUP1)**

**Source: 21D0643-01**

Prepared & Analyzed: 04/14/21

% Solids	94.1		% Wt			93.8		0.270	10	
----------	------	--	------	--	--	------	--	-------	----	--

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**QUALITY CONTROL**
**TCLP - Metals Analyses - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B280361 - SW-846 3010A</b>										
<b>Blank (B280361-BLK1)</b>										
					Prepared: 04/17/21 Analyzed: 04/18/21					
Lead	ND	0.10	mg/L							
<b>LCS (B280361-BS1)</b>										
					Prepared: 04/17/21 Analyzed: 04/18/21					
Lead	0.501	0.10	mg/L	0.500		100	80-120			
<b>LCS Dup (B280361-BSD1)</b>										
					Prepared: 04/17/21 Analyzed: 04/18/21					
Lead	0.504	0.10	mg/L	0.500		101	80-120	0.651	20	

**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.

**CERTIFICATIONS**

**Certified Analyses included in this Report**

Analyte	Certifications
<i>SW-846 6010D in Soil</i>	
Lead	CT,NH,NY,AIHA,ME,VA,NC
<i>SW-846 6010D in Water</i>	
Lead	NY,CT,ME,NC,NH,VA

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2021
CT	Connecticut Department of Public Health	PH-0165	12/31/2022
NY	New York State Department of Health	10899 NELAP	04/1/2022
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2022
RI	Rhode Island Department of Health	LAO00112	12/30/2021
NC	North Carolina Div. of Water Quality	652	12/31/2021
NJ	New Jersey DEP	MA007 NELAP	06/30/2021
FL	Florida Department of Health	E871027 NELAP	06/30/2021
VT	Vermont Department of Health Lead Laboratory	LL720741	07/30/2021
ME	State of Maine	MA00100	06/9/2021
VA	Commonwealth of Virginia	460217	12/14/2021
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2021
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2021
NC-DW	North Carolina Department of Health	25703	07/31/2021
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2021
MI	Dept. of Env, Great Lakes, and Energy	9100	09/6/2021



Phone: 413-525-2332  
 Fax: 413-525-6405  
 Email: info@contestlabs.com

2100643

http://www.contestlabs.com

CHAIN OF CUSTODY RECORD

39 Spruce Street  
 East Longmeadow, MA 01028

Doc # 381 Rev 2\_06262019

Company Name: **Vertex**  
 Address: **100N Washington St Boston MA**  
 Phone: **781-225-6177-275-5407**  
 Project Name: **Wayland**  
 Project Location: **MA**  
 Project Number: **67404**  
 Project Manager: **C. Sarson**  
 Con-Test Quote Name/Number:  
 Invoice Recipient: **K. Sarson**  
 Sampled By: **K. Sarson**

Requested Turnaround Time		Dissolved Metals Samples	
5-Day <input checked="" type="checkbox"/>	10-Day <input type="checkbox"/>	<input type="radio"/> Field Filtered	<input type="radio"/> Lab to Filter
PFAS 10-Day (std) <input type="checkbox"/>	Due Date:		
Rush-Approval Required		Orthophosphate Samples	
1-Day <input type="checkbox"/>	3-Day <input type="checkbox"/>	<input type="radio"/> Field Filtered	<input type="radio"/> Lab to Filter
2-Day <input type="checkbox"/>	4-Day <input type="checkbox"/>		
Data Delivery			
Format:	PDF <input checked="" type="checkbox"/>	EXCEL <input checked="" type="checkbox"/>	
Other:	<b>equiv</b>		
CLP Like Data Pkg Required:	<input type="checkbox"/>		
Email To:	<b>ksarson@vertexeng.com</b>		
Fax To #:			

ANALYSIS REQUESTED											
Preservation Code											
Country/Use Only											
Total Number Of:											
VIALS											
GLASS <b>4</b>											
PLASTIC											
BACTERIA											
ENCORE											
Glassware in the fridge? Y/N											
Glassware in freezer? Y/N											
Prepackaged Cooler? Y/N											
*Contest is not responsible for missing samples from prepacked coolers											
<sup>1</sup> Matrix Codes: GW = Ground Water WW = Waste Water DW = Drinking Water A = Air S = Soil SL = Sludge SOL = Solid O = Other (please define)											
<sup>2</sup> 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)											

Con-Test Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE
	V-402 (2-4)	4/12/21	0820	Comp	S	U		1			

Total lead  
TCUP lead

extra samples jars are not needed per client. JLH 4/14/2021

Relinquished by: (signature) **[Signature]** Date/Time: **4/13/21 1055**  
 Received by: (signature) **[Signature]** Date/Time: **4/13/21 1055**  
 Relinquished by: (signature) **[Signature]** Date/Time: **4/13/21 1620**  
 Received by: (signature) **[Signature]** Date/Time: **4/13/21 1020**  
 Relinquished by: (signature) **[Signature]** Date/Time:  
 Received by: (signature) **[Signature]** Date/Time:  
 Relinquished by: (signature) **[Signature]** Date/Time:  
 Received by: (signature) **[Signature]** Date/Time:

Client Comments:

Detection Limit Requirements	Special Requirements
MA <input checked="" type="checkbox"/>	MA MCP Required <input checked="" type="checkbox"/>
	MCP Certification Form Required <input type="checkbox"/>
	CT RCP Required <input type="checkbox"/>
	RCP Certification Form Required <input type="checkbox"/>
Other <input type="checkbox"/>	MA State DW Required <input type="checkbox"/>
PWSID #	

Project Entity

Government <input type="checkbox"/>	Municipality <input type="checkbox"/>	MWRA <input type="checkbox"/>	WRTA <input type="checkbox"/>
Federal <input type="checkbox"/>	21 J <input type="checkbox"/>	School <input type="checkbox"/>	
City <input type="checkbox"/>	Brownfield <input type="checkbox"/>	MBTA <input type="checkbox"/>	

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

Comments:

**[Handwritten Signature]**

**Disclaimer:** Con-Test Labs is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Con Test values your partnership on each project and will try to assist with missing information, but will not be held accountable.

I Have Not Confirmed Sample Container Numbers With Lab Staff Before Relinquishing Over Samples \_\_\_\_\_



**con-test**<sup>®</sup>  
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 Vertex  
 Received By [Signature] Date 4/13/21 Time 1620  
 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 # 2 Actual Temp -2.8  
 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? F  
 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 T 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? F Who was notified? \_\_\_\_\_  
 Are there Rushes? F Who was notified? \_\_\_\_\_  
 Are there Short Holds? F Who was notified? \_\_\_\_\_  
 Is there enough Volume? T  
 Is there Headspace where applicable? n/a 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? \_\_\_\_\_ Acid n/a Base n/a

Vials	#	Containers:	#	#	#
Unp-		1 Liter Amb.		1 Liter Plastic	16 oz Amb.
HCL-		500 mL Amb.		500 mL Plastic	8oz <u>Amb</u> /Clear
Meoh-		250 mL Amb.		250 mL Plastic	4oz Amb/Clear
Bisulfate-		Flashpoint		Col./Bacteria	2oz <u>Amb</u> /Clear
DI-		Other Glass		Other Plastic	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:**

Received samples V-401 (2-4) and V-403 (2-4) - not listed on COC.

## MADEP MCP Analytical Method Report Certification Form

Laboratory Name: Con-Test, a Pace Analytical Laboratory	Project #: 21D0643
Project Location: Wayland, MA	RTN:

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]  
21D0643-01

Matrices: Soil

**CAM Protocol (check all that below)**

8260 VOC CAM II A ( )	7470/7471 Hg CAM IIIB ( )	MassDEP VPH CAM IV A ( )	8082 PCB CAM V A ( )	9014 Total Cyanide/PAC CAM VI A ( )	6860 Perchlorate CAM VIII B ( )
8270 SVOC CAM II B ( )	7010 Metals CAM III C ( )	MassDEP VPH CAM IV C ( )	8081 Pesticides CAM V B ( )	7196 Hex Cr CAM VI B ( )	MassDEP APH CAM IX A ( )
6010 Metals CAM III A (X)	6020 Metals CAM III D ( )	MassDEP EPH CAM IV B ( )	8151 Herbicides CAM V C ( )	8330 Explosives CAM VIII A ( )	TO-15 VOC CAM IX B ( )

**Affirmative response to Questions A through F is required for "Presumptive Certainty" status**

<b>A</b>	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?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>B</b>	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>C</b>	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>D</b>	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?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>E a</b>	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).	<input type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>E b</b>	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	<input type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>F</b>	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)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>

**A response to questions G, H and I below is required for "Presumptive Certainty" status**

<b>G</b>	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
----------	---	--

**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.**

<b>H</b>	Were all QC performance standards specified in the CAM protocol(s) achieved?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>I</b>	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <sup>1</sup>

<sup>1</sup>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: Lisa Worthington Position: Technical Representative  
Printed Name: Lisa A. Worthington Date: 04/19/21



April 23, 2021

Kristen Sarson  
Vertex Engineering - Boston  
100 North Washington St. Suite 302  
Boston, MA 02114

Project Location: Wayland, MA  
Client Job Number:  
Project Number: 67404  
Laboratory Work Order Number: 21D0885

Enclosed are results of analyses for samples received by the laboratory on April 16, 2021. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jessica L. Hoffman  
Project Manager

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Vertex Engineering - Boston  
 100 North Washington St. Suite 302  
 Boston, MA 02114  
 ATTN: Kristen Sarson

REPORT DATE: 4/23/2021

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 67404

**ANALYTICAL SUMMARY**

WORK ORDER NUMBER: 21D0885

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

PROJECT LOCATION: Wayland, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
V-106 (MW)	21D0885-01	Ground Water		SM 21-22 4500 P E SM21-22 4500 H B SW-846 6020B	
V-202 (MW)	21D0885-02	Ground Water		SM 21-22 4500 P E SM21-22 4500 H B SW-846 6020B	
V-201 (MW)	21D0885-03	Ground Water		SM 21-22 4500 P E SM21-22 4500 H B SW-846 6020B	

**CASE NARRATIVE SUMMARY**

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

**SM 21-22 4500 P E**

**Qualifications:**

---

**Z-01**

Calibration point outside acceptable back calculate recovery. Reanalysis yielded similar non-conformance.

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

**Phosphorus, Total**

21D0885-01[V-106 (MW)], 21D0885-02[V-202 (MW)], 21D0885-03[V-201 (MW)]

**SM21-22 4500 H B**

**Qualifications:**

---

**H-05**

Holding time was exceeded. pH analysis should be performed immediately at time of sampling. Nominal 15 minute holding time was exceeded.

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

**pH**

21D0885-01[V-106 (MW)], 21D0885-02[V-202 (MW)], 21D0885-03[V-201 (MW)]

The results of analyses reported only relate to samples submitted to Con-Test, a Pace 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  
Technical Representative

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

Project Location: Wayland, MA

Sample Description:

Work Order: 21D0885

Date Received: 4/16/2021

Field Sample #: V-106 (MW)

Sampled: 4/16/2021 08:45

Sample ID: 21D0885-01

Sample Matrix: Ground Water

**Metals Analyses (Dissolved)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.0	µg/L	1		SW-846 6020B	4/20/21	4/21/21 12:50	MJH
Copper	3.6	1.0	µg/L	1		SW-846 6020B	4/20/21	4/21/21 12:50	MJH
Lead	ND	0.50	µg/L	1		SW-846 6020B	4/20/21	4/21/21 12:50	MJH

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

Project Location: Wayland, MA

Sample Description:

Work Order: 21D0885

Date Received: 4/16/2021

**Field Sample #: V-106 (MW)**

Sampled: 4/16/2021 08:45

**Sample ID: 21D0885-01**

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
pH @16.2°C	6.0		pH Units	1	H-05	SM21-22 4500 H B	4/17/21	4/17/21 10:00	ALG
Phosphorus, Total	0.15	0.050	mg/L	1	Z-01	SM 21-22 4500 P E	4/21/21	4/22/21 11:30	EC

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Project Location: Wayland, MA

Sample Description:

Work Order: 21D0885

Date Received: 4/16/2021

Field Sample #: V-202 (MW)

Sampled: 4/16/2021 09:45

Sample ID: 21D0885-02

Sample Matrix: Ground Water

**Metals Analyses (Dissolved)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.0	µg/L	1		SW-846 6020B	4/20/21	4/21/21 12:53	MJH
Copper	1.1	1.0	µg/L	1		SW-846 6020B	4/20/21	4/21/21 12:53	MJH
Lead	ND	0.50	µg/L	1		SW-846 6020B	4/20/21	4/21/21 12:53	MJH

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Project Location: Wayland, MA

Sample Description:

Work Order: 21D0885

Date Received: 4/16/2021

Field Sample #: V-202 (MW)

Sampled: 4/16/2021 09:45

Sample ID: 21D0885-02

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
pH @16.7°C	6.6		pH Units	1	H-05	SM21-22 4500 H B	4/17/21	4/17/21 10:00	ALG
Phosphorus, Total	ND	0.050	mg/L	1	Z-01	SM 21-22 4500 P E	4/21/21	4/22/21 11:30	EC



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Project Location: Wayland, MA

Sample Description:

Work Order: 21D0885

Date Received: 4/16/2021

Field Sample #: V-201 (MW)

Sampled: 4/16/2021 11:00

Sample ID: 21D0885-03

Sample Matrix: Ground Water

**Metals Analyses (Dissolved)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.0	µg/L	1		SW-846 6020B	4/20/21	4/21/21 12:57	MJH
Copper	4.6	1.0	µg/L	1		SW-846 6020B	4/20/21	4/21/21 12:57	MJH
Lead	ND	0.50	µg/L	1		SW-846 6020B	4/20/21	4/21/21 12:57	MJH

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Project Location: Wayland, MA

Sample Description:

Work Order: 21D0885

Date Received: 4/16/2021

Field Sample #: V-201 (MW)

Sampled: 4/16/2021 11:00

Sample ID: 21D0885-03

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
pH @17.4°C	6.5		pH Units	1	H-05	SM21-22 4500 H B	4/17/21	4/17/21 10:00	ALG
Phosphorus, Total	ND	0.050	mg/L	1	Z-01	SM 21-22 4500 P E	4/21/21	4/22/21 11:30	EC

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**Sample Extraction Data**
**SM 21-22 4500 P E**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
21D0885-01 [V-106 (MW)]	B280484	50.0	50.0	04/21/21
21D0885-02 [V-202 (MW)]	B280484	50.0	50.0	04/21/21
21D0885-03 [V-201 (MW)]	B280484	50.0	50.0	04/21/21

**SM21-22 4500 H B**

Lab Number [Field ID]	Batch	Initial [mL]	Date
21D0885-01 [V-106 (MW)]	B280356	50.0	04/17/21
21D0885-02 [V-202 (MW)]	B280356	50.0	04/17/21
21D0885-03 [V-201 (MW)]	B280356	50.0	04/17/21

**Prep Method: SW-846 3005A Dissolved    Analytical Method: SW-846 6020B**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
21D0885-01 [V-106 (MW)]	B280540	50.0	50.0	04/20/21
21D0885-02 [V-202 (MW)]	B280540	50.0	50.0	04/20/21
21D0885-03 [V-201 (MW)]	B280540	50.0	50.0	04/20/21

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**QUALITY CONTROL**
**Metals Analyses (Dissolved) - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B280540 - SW-846 3005A Dissolved</b>										
<b>Blank (B280540-BLK1)</b>										
Prepared: 04/20/21 Analyzed: 04/21/21										
Antimony	ND	1.0	µg/L							
Copper	ND	1.0	µg/L							
Lead	ND	0.50	µg/L							
<b>LCS (B280540-BS1)</b>										
Prepared: 04/20/21 Analyzed: 04/21/21										
Antimony	508	10	µg/L	500		102	80-120			
Copper	948	10	µg/L	1000		94.8	80-120			
Lead	474	5.0	µg/L	500		94.7	80-120			
<b>LCS Dup (B280540-BSD1)</b>										
Prepared: 04/20/21 Analyzed: 04/21/21										
Antimony	513	10	µg/L	500		103	80-120	0.981	20	
Copper	956	10	µg/L	1000		95.6	80-120	0.834	20	
Lead	475	5.0	µg/L	500		94.9	80-120	0.188	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
<b>Batch B280356 - SM21-22 4500 H B</b>										
<b>LCS (B280356-BS1)</b>				Prepared & Analyzed: 04/17/21						
pH	5.97		pH Units	6.00		99.5	90-110			
<b>LCS (B280356-BS2)</b>				Prepared & Analyzed: 04/17/21						
pH	5.98		pH Units	6.00		99.7	90-110			
<b>Batch B280484 - SM 21-22 4500 P E</b>										
<b>Blank (B280484-BLK1)</b>				Prepared: 04/21/21 Analyzed: 04/22/21						
Phosphorus, Total	ND	0.050	mg/L							
<b>LCS (B280484-BS1)</b>				Prepared: 04/21/21 Analyzed: 04/22/21						
Phosphorus, Total	0.15	0.050	mg/L	0.176		85.6	82.6-116			
<b>LCS Dup (B280484-BSD1)</b>				Prepared: 04/21/21 Analyzed: 04/22/21						
Phosphorus, Total	0.16	0.050	mg/L	0.176		93.6	82.6-116	8.97	20.4	

---

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**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.
H-05	Holding time was exceeded. pH analysis should be performed immediately at time of sampling. Nominal 15 minute holding time was exceeded.
Z-01	Calibration point outside acceptable back calculate recovery. Reanalysis yielded similar non-conformance.

**CERTIFICATIONS**

**Certified Analyses included in this Report**

Analyte	Certifications
<b>SM 21-22 4500 P E in Water</b>	
Phosphorus, Total	CT,MA,NH,NY,RI,NC,ME,VA
<b>SM21-22 4500 H B in Water</b>	
pH	CT,MA,RI
<b>SW-846 6020B in Water</b>	
Antimony	CT,NH,NY,ME,VA,NC
Copper	CT,NH,NY,NC,ME,VA
Lead	CT,NH,NY,NC,ME,VA

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2021
CT	Connecticut Department of Public Health	PH-0165	12/31/2022
NY	New York State Department of Health	10899 NELAP	04/1/2022
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2022
RI	Rhode Island Department of Health	LAO00112	12/30/2021
NC	North Carolina Div. of Water Quality	652	12/31/2021
NJ	New Jersey DEP	MA007 NELAP	06/30/2021
FL	Florida Department of Health	E871027 NELAP	06/30/2021
VT	Vermont Department of Health Lead Laboratory	LL720741	07/30/2021
ME	State of Maine	MA00100	06/9/2021
VA	Commonwealth of Virginia	460217	12/14/2021
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2021
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2021
NC-DW	North Carolina Department of Health	25703	07/31/2021
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2021
MI	Dept. of Env, Great Lakes, and Energy	9100	09/6/2021



Phone: 413-525-2332  
Fax: 413-525-6405

Email: info@contestlabs.com

Company Name: THE WYOMX COMPANY INC  
Address: 100 N WASHINGTON ST 3RD FLOOR  
Phone: 381 972 5463  
Project Name: Wayland MA

Project Location: 67404 Wayland MA  
Project Number: 67404  
Project Manager: Y. Sarason

Con-Test Quote Name/Number: Y. Sarason

Invoice Recipient: Y. Sarason

Sampled By: K. Sarason

http://www.contestlabs.com

CHAIN OF CUSTODY RECORD

39 Spruce Street  
East Longmeadow, MA 01028

7-Day 5 Day 10-Day 15-Day  
PFAS 10-Day (std) Due Date: 09/15/14

1-Day 2-Day 3-Day 4-Day  
Orthophosphate Samples  
Field Filtered Lab to Filter

Format: PDF EXCEL

Other:  EXCEL

CLP Like Data Pkg Required:

Email To: KSARASON@VORTYX.COM

Fax To #:

ANALYSIS REQUESTED

Preservation Code  
Total Number Of:  
VIALS  
GLASS  
PLASTIC  
BACTERIA  
ENCORE  
Glassware in the fridge? Y/N  
Glassware in freezer? Y/N  
Prepackaged Coolers Y/N  
\*Contest is not responsible for missing samples from prepacked coolers

Table with columns for sample ID, date, and analysis results (VIALS, GLASS, PLASTIC, BACTERIA, ENCORE). Includes handwritten notes like 'Total Phosphors' and 'Disc. Ammonyphos lead'.

- 1 Matrix Codes: GW = Ground Water, WW = Waste Water, DW = Drinking Water, A = Air, S = Soil, SL = Sludge, SOL = Solid, O = Other (please define)
- 2 Preservation Codes: I = Iced, H = HCL, M = Methanol, N = Nitric Acid, S = Sulfuric Acid, B = Sodium Bisulfate, X = Sodium Hydroxide, Thiosulfate, O = Other (please define)

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

Special Requirements  
MA MCP Required  
MCP Certification Form Required  
CY RCP Required  
RCP Certification Form Required  
MA State DW Required

Client Comments  
Relinquished by: (signature) Date/Time: 4/16/14  
Received by: (signature) Date/Time: 4/16/14  
Relinquished by: (signature) Date/Time: 4/16/14  
Received by: (signature) Date/Time: 4/16/14  
Relinquished by: (signature) Date/Time: 4/16/14  
Received by: (signature) Date/Time: 4/16/14

Project Entry  
Government:  Municipality:   
Federal:  City:   
MWRSA:  School:   
MBTA:  Brownfield:   
WRMA:   
Chromatogram:   
AIHA-LAP, LLC:   
Other:   
NEIAC and AIHA-LAP, LLC Accredited

Disclaimer: Con-Test Labs is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Con-Test values your partnership on each project and will try to assist with missing information, but will not be held accountable.



I Have Not Confirmed Sample Container Numbers With Lab Staff Before Relinquishing Over Samples \_\_\_\_\_



**con-test**<sup>®</sup>  
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 Vortex

Received By CU Date 4/16/21 Time 2020

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 # 2 Actual Temp - 2.0  
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 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? F Who was notified? \_\_\_\_\_

Are there Short Holds? T Who was notified? CASSIE

Is there enough Volume? T

Is there Headspace where applicable? NA 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? \_\_\_\_\_ Acid T Base \_\_\_\_\_

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-		Flashpoint		Col./Bacteria	2oz Amb/Clear
DI-		Other Glass		Other Plastic	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, a Pace Analytical Laboratory	Project #: 21D0885
Project Location: Wayland, MA	RTN:

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]  
 21D0885-01 thru 21D0885-03

Matrices: Water

**CAM Protocol (check all that below)**

8260 VOC CAM II A ( )	7470/7471 Hg CAM III B ( )	MassDEP VPH CAM IV A ( )	8082 PCB CAM V A ( )	9014 Total Cyanide/PAC CAM VI A ( )	6860 Perchlorate CAM VIII B ( )
8270 SVOC CAM II B ( )	7010 Metals CAM III C ( )	MassDEP VPH CAM IV C ( )	8081 Pesticides CAM V B ( )	7196 Hex Cr CAM VI B ( )	MassDEP APH CAM IX A ( )
6010 Metals CAM III A ( )	6020 Metals CAM III D (X)	MassDEP EPH CAM IV B ( )	8151 Herbicides CAM V C ( )	8330 Explosives CAM VIII A ( )	TO-15 VOC CAM IX B ( )

**Affirmative response to Questions A through F is required for "Presumptive Certainty" status**

<b>A</b>	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?	<input checked="checked" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>B</b>	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	<input checked="checked" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>C</b>	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	<input checked="checked" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>D</b>	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?	<input checked="checked" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>E a</b>	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).	<input type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>E b</b>	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	<input type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>F</b>	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)?	<input checked="checked" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>

**A response to questions G, H and I below is required for "Presumptive Certainty" status**

<b>G</b>	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	<input checked="checked" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
----------	---	---

**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.**

<b>H</b>	Were all QC performance standards specified in the CAM protocol(s) achieved?	<input type="checkbox"/> Yes <input checked="checked" type="checkbox"/> No <sup>1</sup>
<b>I</b>	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	<input checked="checked" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>

<sup>1</sup>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: Lisa Worthington                      Position: Technical Representative  
 Printed Name: Lisa A. Worthington                      Date: 04/23/21

April 23, 2021

Kristen Sarson  
Vertex Engineering - Boston  
100 North Washington St. Suite 302  
Boston, MA 02114

Project Location: Wayland, MA  
Client Job Number:  
Project Number: 67404  
Laboratory Work Order Number: 21D0885

Enclosed are results of analyses for samples received by the laboratory on April 16, 2021. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jessica L. Hoffman  
Project Manager

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 Vertex Engineering - Boston  
 100 North Washington St. Suite 302  
 Boston, MA 02114  
 ATTN: Kristen Sarson

REPORT DATE: 4/23/2021

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 67404

**ANALYTICAL SUMMARY**

WORK ORDER NUMBER: 21D0885

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

PROJECT LOCATION: Wayland, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
V-106 (MW)	21D0885-01	Ground Water		SM 21-22 4500 P E SM21-22 4500 H B SW-846 6020B	
V-202 (MW)	21D0885-02	Ground Water		SM 21-22 4500 P E SM21-22 4500 H B SW-846 6020B	
V-201 (MW)	21D0885-03	Ground Water		SM 21-22 4500 P E SM21-22 4500 H B SW-846 6020B	

**CASE NARRATIVE SUMMARY**

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

**SM 21-22 4500 P E**

**Qualifications:**

---

**Z-01**

Calibration point outside acceptable back calculate recovery. Reanalysis yielded similar non-conformance.

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

**Phosphorus, Total**

21D0885-01[V-106 (MW)], 21D0885-02[V-202 (MW)], 21D0885-03[V-201 (MW)]

**SM21-22 4500 H B**

**Qualifications:**

---

**H-05**

Holding time was exceeded. pH analysis should be performed immediately at time of sampling. Nominal 15 minute holding time was exceeded.

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

**pH**

21D0885-01[V-106 (MW)], 21D0885-02[V-202 (MW)], 21D0885-03[V-201 (MW)]

The results of analyses reported only relate to samples submitted to Con-Test, a Pace 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  
Technical Representative

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

Project Location: Wayland, MA

Sample Description:

Work Order: 21D0885

Date Received: 4/16/2021

Field Sample #: V-106 (MW)

Sampled: 4/16/2021 08:45

Sample ID: 21D0885-01

Sample Matrix: Ground Water

**Metals Analyses (Dissolved)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.0	µg/L	1		SW-846 6020B	4/20/21	4/21/21 12:50	MJH
Copper	3.6	1.0	µg/L	1		SW-846 6020B	4/20/21	4/21/21 12:50	MJH
Lead	ND	0.50	µg/L	1		SW-846 6020B	4/20/21	4/21/21 12:50	MJH

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Project Location: Wayland, MA

Sample Description:

Work Order: 21D0885

Date Received: 4/16/2021

Field Sample #: V-106 (MW)

Sampled: 4/16/2021 08:45

Sample ID: 21D0885-01

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
pH @16.2°C	6.0		pH Units	1	H-05	SM21-22 4500 H B	4/17/21	4/17/21 10:00	ALG
Phosphorus, Total	0.15	0.050	mg/L	1	Z-01	SM 21-22 4500 P E	4/21/21	4/22/21 11:30	EC



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Project Location: Wayland, MA

Sample Description:

Work Order: 21D0885

Date Received: 4/16/2021

Field Sample #: V-202 (MW)

Sampled: 4/16/2021 09:45

Sample ID: 21D0885-02

Sample Matrix: Ground Water

**Metals Analyses (Dissolved)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.0	µg/L	1		SW-846 6020B	4/20/21	4/21/21 12:53	MJH
Copper	1.1	1.0	µg/L	1		SW-846 6020B	4/20/21	4/21/21 12:53	MJH
Lead	ND	0.50	µg/L	1		SW-846 6020B	4/20/21	4/21/21 12:53	MJH

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Project Location: Wayland, MA

Sample Description:

Work Order: 21D0885

Date Received: 4/16/2021

Field Sample #: V-202 (MW)

Sampled: 4/16/2021 09:45

Sample ID: 21D0885-02

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
pH @16.7°C	6.6		pH Units	1	H-05	SM21-22 4500 H B	4/17/21	4/17/21 10:00	ALG
Phosphorus, Total	ND	0.050	mg/L	1	Z-01	SM 21-22 4500 P E	4/21/21	4/22/21 11:30	EC

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Project Location: Wayland, MA

Sample Description:

Work Order: 21D0885

Date Received: 4/16/2021

Field Sample #: V-201 (MW)

Sampled: 4/16/2021 11:00

Sample ID: 21D0885-03

Sample Matrix: Ground Water

**Metals Analyses (Dissolved)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.0	µg/L	1		SW-846 6020B	4/20/21	4/21/21 12:57	MJH
Copper	4.6	1.0	µg/L	1		SW-846 6020B	4/20/21	4/21/21 12:57	MJH
Lead	ND	0.50	µg/L	1		SW-846 6020B	4/20/21	4/21/21 12:57	MJH

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Project Location: Wayland, MA

Sample Description:

Work Order: 21D0885

Date Received: 4/16/2021

Field Sample #: V-201 (MW)

Sampled: 4/16/2021 11:00

Sample ID: 21D0885-03

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
pH @17.4°C	6.5		pH Units	1	H-05	SM21-22 4500 H B	4/17/21	4/17/21 10:00	ALG
Phosphorus, Total	ND	0.050	mg/L	1	Z-01	SM 21-22 4500 P E	4/21/21	4/22/21 11:30	EC

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**Sample Extraction Data**
**SM 21-22 4500 P E**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
21D0885-01 [V-106 (MW)]	B280484	50.0	50.0	04/21/21
21D0885-02 [V-202 (MW)]	B280484	50.0	50.0	04/21/21
21D0885-03 [V-201 (MW)]	B280484	50.0	50.0	04/21/21

**SM21-22 4500 H B**

Lab Number [Field ID]	Batch	Initial [mL]	Date
21D0885-01 [V-106 (MW)]	B280356	50.0	04/17/21
21D0885-02 [V-202 (MW)]	B280356	50.0	04/17/21
21D0885-03 [V-201 (MW)]	B280356	50.0	04/17/21

**Prep Method: SW-846 3005A Dissolved    Analytical Method: SW-846 6020B**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
21D0885-01 [V-106 (MW)]	B280540	50.0	50.0	04/20/21
21D0885-02 [V-202 (MW)]	B280540	50.0	50.0	04/20/21
21D0885-03 [V-201 (MW)]	B280540	50.0	50.0	04/20/21

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**QUALITY CONTROL**
**Metals Analyses (Dissolved) - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	--------------------	-------	----------------	------------------	------	----------------	-----	--------------	-------

**Batch B280540 - SW-846 3005A Dissolved**
**Blank (B280540-BLK1)**

Prepared: 04/20/21 Analyzed: 04/21/21

Antimony	ND	1.0	µg/L							
Copper	ND	1.0	µg/L							
Lead	ND	0.50	µg/L							

**LCS (B280540-BS1)**

Prepared: 04/20/21 Analyzed: 04/21/21

Antimony	508	10	µg/L	500		102	80-120			
Copper	948	10	µg/L	1000		94.8	80-120			
Lead	474	5.0	µg/L	500		94.7	80-120			

**LCS Dup (B280540-BSD1)**

Prepared: 04/20/21 Analyzed: 04/21/21

Antimony	513	10	µg/L	500		103	80-120	0.981	20	
Copper	956	10	µg/L	1000		95.6	80-120	0.834	20	
Lead	475	5.0	µg/L	500		94.9	80-120	0.188	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
<b>Batch B280356 - SM21-22 4500 H B</b>										
<b>LCS (B280356-BS1)</b>										
Prepared & Analyzed: 04/17/21										
pH	5.97		pH Units	6.00		99.5	90-110			
<b>LCS (B280356-BS2)</b>										
Prepared & Analyzed: 04/17/21										
pH	5.98		pH Units	6.00		99.7	90-110			
<b>Batch B280484 - SM 21-22 4500 P E</b>										
<b>Blank (B280484-BLK1)</b>										
Prepared: 04/21/21 Analyzed: 04/22/21										
Phosphorus, Total	ND	0.050	mg/L							
<b>LCS (B280484-BS1)</b>										
Prepared: 04/21/21 Analyzed: 04/22/21										
Phosphorus, Total	0.15	0.050	mg/L	0.176		85.6	82.6-116			
<b>LCS Dup (B280484-BSD1)</b>										
Prepared: 04/21/21 Analyzed: 04/22/21										
Phosphorus, Total	0.16	0.050	mg/L	0.176		93.6	82.6-116	8.97	20.4	

---

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

**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.
H-05	Holding time was exceeded. pH analysis should be performed immediately at time of sampling. Nominal 15 minute holding time was exceeded.
Z-01	Calibration point outside acceptable back calculate recovery. Reanalysis yielded similar non-conformance.



**CERTIFICATIONS**
**Certified Analyses included in this Report**

Analyte	Certifications
<b>SM 21-22 4500 P E in Water</b>	
Phosphorus, Total	CT,MA,NH,NY,RI,NC,ME,VA
<b>SM21-22 4500 H B in Water</b>	
pH	CT,MA,RI
<b>SW-846 6020B in Water</b>	
Antimony	CT,NH,NY,ME,VA,NC
Copper	CT,NH,NY,NC,ME,VA
Lead	CT,NH,NY,NC,ME,VA

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2021
CT	Connecticut Department of Public Health	PH-0165	12/31/2022
NY	New York State Department of Health	10899 NELAP	04/1/2022
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2022
RI	Rhode Island Department of Health	LAO00112	12/30/2021
NC	North Carolina Div. of Water Quality	652	12/31/2021
NJ	New Jersey DEP	MA007 NELAP	06/30/2021
FL	Florida Department of Health	E871027 NELAP	06/30/2021
VT	Vermont Department of Health Lead Laboratory	LL720741	07/30/2021
ME	State of Maine	MA00100	06/9/2021
VA	Commonwealth of Virginia	460217	12/14/2021
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2021
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2021
NC-DW	North Carolina Department of Health	25703	07/31/2021
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2021
MI	Dept. of Env, Great Lakes, and Energy	9100	09/6/2021

2100885  
con-test ANALYTICAL LABORATORY  
Phone: 413-525-2332 Fax: 413-525-6405  
Email: info@contestlabs.com  
Address: 100 N Washington St 302 Boston  
Phone: 381 977 5463  
Project Name: Wayland  
Project Location: 67404 Wayland MA  
Project Number: 67404  
Project Manager: Y. Sarason  
Con-Test Quote Name/Number: Y. Sarason  
Invoice Recipient: Y. Sarason  
Sampled By: K. Sarason

http://www.contestlabs.com  
CHAIN OF CUSTODY RECORD  
39 Spruce Street East Longmeadow, MA 01028  
Doc # 381 Rev 2\_06262019

Requested Turnaround Time: 7-Day 5 Day  10-Day  PFAS 10-Day (std)  Due Date:   
 Rush Approval Required: 1-Day  3-Day  2-Day  4-Day  Field Filtered Lab to Filter  Orthophosphate Samples Field Filtered Lab to Filter

Format: PDF  EXCEL  Other:   
 CLP Like Data Pkg Required:  Email To: K. Sarason @ verterexy.com Fax To #:

Con-Test Work Order #	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	Matrix Code	Conc. Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE
1	V-106 (MW)	4/16/14	0845	Grab	GW	U					
2	V-202 (MW)	↓	0945	↓	↓	↓	3				
3	N-201 (MW)	↓	1100	↓	↓	↓	3				

Client Comments:   
 Relinquished by: (signature) Date/Time: 4/16/14 12:47  
 Received by: (signature) Date/Time: 4/16/14 12:26  
 Relinquished by: (signature) Date/Time: 4/16/14 2:00  
 Received by: (signature) Date/Time: 4/16/14 2:00  
 Relinquished by: (signature) Date/Time:   
 Received by: (signature) Date/Time:   
 Relinquished by: (signature) Date/Time:   
 Received by: (signature) Date/Time:   
 Relinquished by: (signature) Date/Time:   
 Received by: (signature) Date/Time:   
 Comments:

Special Requirements: MA MCP Required  MA MCP Certification Form Required  CT MCP Required  MCP Certification Form Required  MA State DW Required

Project Entry: Government  Municipality  Federal  City  WRTA  MWRA School MBTA

Other:  Chromatogram  AIMA-LAP, LLC

NEIAC and AIMA-LAP, LLC Accredited

2 Preservation Codes:   
 1 = Iced   
 H = HCL   
 M = Methanol   
 N = Nitric Acid   
 S = Sulfuric Acid   
 B = Sodium Bisulfate   
 X = Sodium Hydroxide   
 Thiosulfate   
 O = Other (please define)

1 Matrix Codes:   
 GW = Ground Water   
 WW = Waste Water   
 DW = Drinking Water   
 A = Air   
 S = Soil   
 SL = Sludge   
 SOL = Solid   
 O = Other (please define)

2 Preservation Codes:   
 1 = Iced   
 H = HCL   
 M = Methanol   
 N = Nitric Acid   
 S = Sulfuric Acid   
 B = Sodium Bisulfate   
 X = Sodium Hydroxide   
 Thiosulfate   
 O = Other (please define)

ANALYSIS REQUESTED:   
 Total Phosphorus   
 Diss. Ammony Nitrate   
 Total Phosphorus   
 Diss. Ammony Nitrate

Total Number Of:   
 VIALS   
 GLASS   
 PLASTIC   
 BACTERIA   
 ENCORE

Glassware in the fridge?   
 Y / N

Glassware in freezer?   
 Y / N

Prepackaged Cooler?   
 Y / N

\*Contest is not responsible for missing samples from prepacked coolers

PCB ONLY:   
 Soxhlet   
 Non Soxhlet

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

Disclaimer: Con-Test Labs is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Con-Test values your partnership on each project and will try to assist with missing information, but will not be held accountable.

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I Have Not Confirmed Sample Container Numbers With Lab Staff Before Relinquishing Over Samples \_\_\_\_\_



**con-test**<sup>®</sup>  
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 Vortex

Received By CU Date 4/16/21 Time 2020

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 # 2 Actual Temp - 2.0  
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 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? F Who was notified? \_\_\_\_\_

Are there Short Holds? T Who was notified? CASSIE

Is there enough Volume? T

Is there Headspace where applicable? NA 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? Acid T Base \_\_\_\_\_

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-		Flashpoint		Col./Bacteria	2oz Amb/Clear
DI-		Other Glass		Other Plastic	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, a Pace Analytical Laboratory	Project #: 21D0885
Project Location: Wayland, MA	RTN:

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]

21D0885-01 thru 21D0885-03

Matrices: Water

**CAM Protocol (check all that below)**

8260 VOC CAM II A ( )	7470/7471 Hg CAM IIIB ( )	MassDEP VPH CAM IV A ( )	8082 PCB CAM V A ( )	9014 Total Cyanide/PAC CAM VI A ( )	6860 Perchlorate CAM VIII B ( )
8270 SVOC CAM II B ( )	7010 Metals CAM III C ( )	MassDEP VPH CAM IV C ( )	8081 Pesticides CAM V B ( )	7196 Hex Cr CAM VI B ( )	MassDEP APH CAM IX A ( )
6010 Metals CAM III A ( )	6020 Metals CAM III D (X)	MassDEP EPH CAM IV B ( )	8151 Herbicides CAM V C ( )	8330 Explosives CAM VIII A ( )	TO-15 VOC CAM IX B ( )

**Affirmative response to Questions A through F is required for "Presumptive Certainty" status**

<b>A</b>	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?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>B</b>	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>C</b>	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>D</b>	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?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>E a</b>	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).	<input type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>E b</b>	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	<input type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>F</b>	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)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>

**A response to questions G, H and I below is required for "Presumptive Certainty" status**

<b>G</b>	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
----------	---	--

**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.**

<b>H</b>	Were all QC performance standards specified in the CAM protocol(s) achieved?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <sup>1</sup>
<b>I</b>	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>

<sup>1</sup>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 Worthington</u>	Position: <u>Technical Representative</u>
Printed Name: <u>Lisa A. Worthington</u>	Date: <u>04/23/21</u>

April 20, 2021

Kristen Sarson  
Vertex Engineering - Boston  
100 North Washington St. Suite 302  
Boston, MA 02114

Project Location: Wayland, MA  
Client Job Number:  
Project Number: 67404  
Laboratory Work Order Number: 21D0977

Enclosed are results of analyses for samples received by the laboratory on April 19, 2021. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jessica L. Hoffman  
Project Manager

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

Vertex Engineering - Boston  
100 North Washington St. Suite 302  
Boston, MA 02114  
ATTN: Kristen Sarson

REPORT DATE: 4/20/2021

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 67404

**ANALYTICAL SUMMARY**

WORK ORDER NUMBER: 21D0977

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

PROJECT LOCATION: Wayland, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
TP-E3-Conf	21D0977-01	Soil		SM 2540G SW-846 8270D-E	
TP-F3-Conf	21D0977-02	Soil		SM 2540G SW-846 8270D-E	
TP-D6-Conf	21D0977-03	Soil		SM 2540G SW-846 8270D-E	
TP-C6-Conf	21D0977-04	Soil		SM 2540G SW-846 8270D-E	

**CASE NARRATIVE SUMMARY**

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

For method 8270E, only PAHs were requested and reported.

The results of analyses reported only relate to samples submitted to Con-Test, a Pace 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  
Technical Representative



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

Project Location: Wayland, MA

Sample Description:

Work Order: 21D0977

Date Received: 4/19/2021

Field Sample #: TP-E3-Conf

Sampled: 4/19/2021 10:45

Sample ID: 21D0977-01

Sample Matrix: Soil

## Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	4/19/21	4/20/21 10:08	IMR
Acenaphthylene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	4/19/21	4/20/21 10:08	IMR
Anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	4/19/21	4/20/21 10:08	IMR
Benzo(a)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	4/19/21	4/20/21 10:08	IMR
Benzo(a)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	4/19/21	4/20/21 10:08	IMR
Benzo(b)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	4/19/21	4/20/21 10:08	IMR
Benzo(g,h,i)perylene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	4/19/21	4/20/21 10:08	IMR
Benzo(k)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	4/19/21	4/20/21 10:08	IMR
Chrysene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	4/19/21	4/20/21 10:08	IMR
Dibenz(a,h)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	4/19/21	4/20/21 10:08	IMR
Fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	4/19/21	4/20/21 10:08	IMR
Fluorene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	4/19/21	4/20/21 10:08	IMR
Indeno(1,2,3-cd)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	4/19/21	4/20/21 10:08	IMR
2-Methylnaphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	4/19/21	4/20/21 10:08	IMR
Naphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	4/19/21	4/20/21 10:08	IMR
Phenanthrene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	4/19/21	4/20/21 10:08	IMR
Pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	4/19/21	4/20/21 10:08	IMR
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Nitrobenzene-d5		80.2	30-130					4/20/21 10:08	
2-Fluorobiphenyl		76.6	30-130					4/20/21 10:08	
p-Terphenyl-d14		114	30-130					4/20/21 10:08	

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Project Location: Wayland, MA

Sample Description:

Work Order: 21D0977

Date Received: 4/19/2021

Field Sample #: TP-E3-Conf

Sampled: 4/19/2021 10:45

Sample ID: 21D0977-01

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	95.9		% Wt	1		SM 2540G	4/19/21	4/20/21 8:44	rmf

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Project Location: Wayland, MA

Sample Description:

Work Order: 21D0977

Date Received: 4/19/2021

Field Sample #: TP-F3-Conf

Sampled: 4/19/2021 10:50

Sample ID: 21D0977-02

Sample Matrix: Soil

## Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	4/19/21	4/20/21 10:31	IMR
Acenaphthylene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	4/19/21	4/20/21 10:31	IMR
Anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	4/19/21	4/20/21 10:31	IMR
Benzo(a)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	4/19/21	4/20/21 10:31	IMR
Benzo(a)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	4/19/21	4/20/21 10:31	IMR
Benzo(b)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	4/19/21	4/20/21 10:31	IMR
Benzo(g,h,i)perylene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	4/19/21	4/20/21 10:31	IMR
Benzo(k)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	4/19/21	4/20/21 10:31	IMR
Chrysene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	4/19/21	4/20/21 10:31	IMR
Dibenz(a,h)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	4/19/21	4/20/21 10:31	IMR
Fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	4/19/21	4/20/21 10:31	IMR
Fluorene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	4/19/21	4/20/21 10:31	IMR
Indeno(1,2,3-cd)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	4/19/21	4/20/21 10:31	IMR
2-Methylnaphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	4/19/21	4/20/21 10:31	IMR
Naphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	4/19/21	4/20/21 10:31	IMR
Phenanthrene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	4/19/21	4/20/21 10:31	IMR
Pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	4/19/21	4/20/21 10:31	IMR
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Nitrobenzene-d5		81.8	30-130					4/20/21 10:31	
2-Fluorobiphenyl		76.5	30-130					4/20/21 10:31	
p-Terphenyl-d14		114	30-130					4/20/21 10:31	

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Project Location: Wayland, MA

Sample Description:

Work Order: 21D0977

Date Received: 4/19/2021

**Field Sample #: TP-F3-Conf**

Sampled: 4/19/2021 10:50

**Sample ID: 21D0977-02**

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	95.6		% Wt	1		SM 2540G	4/19/21	4/20/21 8:45	rmf

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Project Location: Wayland, MA

Sample Description:

Work Order: 21D0977

Date Received: 4/19/2021

Field Sample #: TP-D6-Conf

Sampled: 4/19/2021 11:00

Sample ID: 21D0977-03

Sample Matrix: Soil

## Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.20	mg/Kg dry	1		SW-846 8270D-E	4/19/21	4/20/21 10:55	IMR
Acenaphthylene	ND	0.20	mg/Kg dry	1		SW-846 8270D-E	4/19/21	4/20/21 10:55	IMR
Anthracene	ND	0.20	mg/Kg dry	1		SW-846 8270D-E	4/19/21	4/20/21 10:55	IMR
Benzo(a)anthracene	0.31	0.20	mg/Kg dry	1		SW-846 8270D-E	4/19/21	4/20/21 10:55	IMR
Benzo(a)pyrene	0.28	0.20	mg/Kg dry	1		SW-846 8270D-E	4/19/21	4/20/21 10:55	IMR
Benzo(b)fluoranthene	0.33	0.20	mg/Kg dry	1		SW-846 8270D-E	4/19/21	4/20/21 10:55	IMR
Benzo(g,h,i)perylene	ND	0.20	mg/Kg dry	1		SW-846 8270D-E	4/19/21	4/20/21 10:55	IMR
Benzo(k)fluoranthene	ND	0.20	mg/Kg dry	1		SW-846 8270D-E	4/19/21	4/20/21 10:55	IMR
Chrysene	0.28	0.20	mg/Kg dry	1		SW-846 8270D-E	4/19/21	4/20/21 10:55	IMR
Dibenz(a,h)anthracene	ND	0.20	mg/Kg dry	1		SW-846 8270D-E	4/19/21	4/20/21 10:55	IMR
Fluoranthene	0.53	0.20	mg/Kg dry	1		SW-846 8270D-E	4/19/21	4/20/21 10:55	IMR
Fluorene	ND	0.20	mg/Kg dry	1		SW-846 8270D-E	4/19/21	4/20/21 10:55	IMR
Indeno(1,2,3-cd)pyrene	ND	0.20	mg/Kg dry	1		SW-846 8270D-E	4/19/21	4/20/21 10:55	IMR
2-Methylnaphthalene	ND	0.20	mg/Kg dry	1		SW-846 8270D-E	4/19/21	4/20/21 10:55	IMR
Naphthalene	ND	0.20	mg/Kg dry	1		SW-846 8270D-E	4/19/21	4/20/21 10:55	IMR
Phenanthrene	0.29	0.20	mg/Kg dry	1		SW-846 8270D-E	4/19/21	4/20/21 10:55	IMR
Pyrene	0.64	0.20	mg/Kg dry	1		SW-846 8270D-E	4/19/21	4/20/21 10:55	IMR
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Nitrobenzene-d5		87.1	30-130					4/20/21 10:55	
2-Fluorobiphenyl		82.3	30-130					4/20/21 10:55	
p-Terphenyl-d14		118	30-130					4/20/21 10:55	

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

Project Location: Wayland, MA

Sample Description:

Work Order: 21D0977

Date Received: 4/19/2021

Field Sample #: TP-D6-Conf

Sampled: 4/19/2021 11:00

Sample ID: 21D0977-03

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	86.3		% Wt	1		SM 2540G	4/19/21	4/20/21 8:45	rmf

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

Project Location: Wayland, MA

Sample Description:

Work Order: 21D0977

Date Received: 4/19/2021

Field Sample #: TP-C6-Conf

Sampled: 4/19/2021 11:05

Sample ID: 21D0977-04

Sample Matrix: Soil

## Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	4/19/21	4/20/21 11:18	IMR
Acenaphthylene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	4/19/21	4/20/21 11:18	IMR
Anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	4/19/21	4/20/21 11:18	IMR
Benzo(a)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	4/19/21	4/20/21 11:18	IMR
Benzo(a)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	4/19/21	4/20/21 11:18	IMR
Benzo(b)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	4/19/21	4/20/21 11:18	IMR
Benzo(g,h,i)perylene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	4/19/21	4/20/21 11:18	IMR
Benzo(k)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	4/19/21	4/20/21 11:18	IMR
Chrysene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	4/19/21	4/20/21 11:18	IMR
Dibenz(a,h)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	4/19/21	4/20/21 11:18	IMR
Fluoranthene	0.26	0.18	mg/Kg dry	1		SW-846 8270D-E	4/19/21	4/20/21 11:18	IMR
Fluorene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	4/19/21	4/20/21 11:18	IMR
Indeno(1,2,3-cd)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	4/19/21	4/20/21 11:18	IMR
2-Methylnaphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	4/19/21	4/20/21 11:18	IMR
Naphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	4/19/21	4/20/21 11:18	IMR
Phenanthrene	0.19	0.18	mg/Kg dry	1		SW-846 8270D-E	4/19/21	4/20/21 11:18	IMR
Pyrene	0.33	0.18	mg/Kg dry	1		SW-846 8270D-E	4/19/21	4/20/21 11:18	IMR
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Nitrobenzene-d5		86.7	30-130					4/20/21 11:18	
2-Fluorobiphenyl		82.9	30-130					4/20/21 11:18	
p-Terphenyl-d14		116	30-130					4/20/21 11:18	

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

Project Location: Wayland, MA

Sample Description:

Work Order: 21D0977

Date Received: 4/19/2021

Field Sample #: TP-C6-Conf

Sampled: 4/19/2021 11:05

Sample ID: 21D0977-04

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	96.5		% Wt	1		SM 2540G	4/19/21	4/20/21 8:45	rmf



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

<b>Lab Number [Field ID]</b>	<b>Batch</b>	<b>Date</b>
21D0977-01 [TP-E3-Conf]	B280447	04/19/21
21D0977-02 [TP-F3-Conf]	B280447	04/19/21
21D0977-03 [TP-D6-Conf]	B280447	04/19/21
21D0977-04 [TP-C6-Conf]	B280447	04/19/21

**Prep Method: SW-846 3546    Analytical Method: SW-846 8270D-E**

<b>Lab Number [Field ID]</b>	<b>Batch</b>	<b>Initial [g]</b>	<b>Final [mL]</b>	<b>Date</b>
21D0977-01 [TP-E3-Conf]	B280401	30.0	1.00	04/19/21
21D0977-02 [TP-F3-Conf]	B280401	30.0	1.00	04/19/21
21D0977-03 [TP-D6-Conf]	B280401	30.0	1.00	04/19/21
21D0977-04 [TP-C6-Conf]	B280401	30.0	1.00	04/19/21

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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
<b>Batch B280401 - SW-846 3546</b>										
<b>Blank (B280401-BLK1)</b>										
Prepared: 04/19/21 Analyzed: 04/20/21										
Acenaphthene	ND	0.17	mg/Kg wet							
Acenaphthylene	ND	0.17	mg/Kg wet							
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							
Benzo(k)fluoranthene	ND	0.17	mg/Kg wet							
Chrysene	ND	0.17	mg/Kg wet							
Dibenz(a,h)anthracene	ND	0.17	mg/Kg wet							
Fluoranthene	ND	0.17	mg/Kg wet							
Fluorene	ND	0.17	mg/Kg wet							
Indeno(1,2,3-cd)pyrene	ND	0.17	mg/Kg wet							
2-Methylnaphthalene	ND	0.17	mg/Kg wet							
Naphthalene	ND	0.17	mg/Kg wet							
Phenanthrene	ND	0.17	mg/Kg wet							
Pyrene	ND	0.17	mg/Kg wet							
Surrogate: Nitrobenzene-d5	2.49		mg/Kg wet	3.33		74.8	30-130			
Surrogate: 2-Fluorobiphenyl	2.32		mg/Kg wet	3.33		69.8	30-130			
Surrogate: p-Terphenyl-d14	3.22		mg/Kg wet	3.33		96.5	30-130			
<b>LCS (B280401-BS1)</b>										
Prepared: 04/19/21 Analyzed: 04/20/21										
Acenaphthene	1.22	0.17	mg/Kg wet	1.67		73.3	40-140			
Acenaphthylene	1.22	0.17	mg/Kg wet	1.67		72.9	40-140			
Anthracene	1.33	0.17	mg/Kg wet	1.67		79.9	40-140			
Benzo(a)anthracene	1.42	0.17	mg/Kg wet	1.67		85.3	40-140			
Benzo(a)pyrene	1.29	0.17	mg/Kg wet	1.67		77.5	40-140			
Benzo(b)fluoranthene	1.38	0.17	mg/Kg wet	1.67		82.7	40-140			
Benzo(g,h,i)perylene	1.39	0.17	mg/Kg wet	1.67		83.7	40-140			
Benzo(k)fluoranthene	1.37	0.17	mg/Kg wet	1.67		82.4	40-140			
Chrysene	1.42	0.17	mg/Kg wet	1.67		85.1	40-140			
Dibenz(a,h)anthracene	1.32	0.17	mg/Kg wet	1.67		79.0	40-140			
Fluoranthene	1.29	0.17	mg/Kg wet	1.67		77.4	40-140			
Fluorene	1.29	0.17	mg/Kg wet	1.67		77.5	40-140			
Indeno(1,2,3-cd)pyrene	1.34	0.17	mg/Kg wet	1.67		80.4	40-140			
2-Methylnaphthalene	1.36	0.17	mg/Kg wet	1.67		81.7	40-140			
Naphthalene	1.13	0.17	mg/Kg wet	1.67		67.8	40-140			
Phenanthrene	1.31	0.17	mg/Kg wet	1.67		78.8	40-140			
Pyrene	1.44	0.17	mg/Kg wet	1.67		86.3	40-140			
Surrogate: Nitrobenzene-d5	2.59		mg/Kg wet	3.33		77.6	30-130			
Surrogate: 2-Fluorobiphenyl	2.57		mg/Kg wet	3.33		77.0	30-130			
Surrogate: p-Terphenyl-d14	3.31		mg/Kg wet	3.33		99.4	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
<b>Batch B280401 - SW-846 3546</b>										
<b>LCS Dup (B280401-BSD1)</b>										
					Prepared: 04/19/21 Analyzed: 04/20/21					
Acenaphthene	1.19	0.17	mg/Kg wet	1.67		71.7	40-140	2.29	30	
Acenaphthylene	1.18	0.17	mg/Kg wet	1.67		71.0	40-140	2.64	30	
Anthracene	1.32	0.17	mg/Kg wet	1.67		79.4	40-140	0.628	30	
Benzo(a)anthracene	1.39	0.17	mg/Kg wet	1.67		83.6	40-140	1.99	30	
Benzo(a)pyrene	1.27	0.17	mg/Kg wet	1.67		76.0	40-140	1.93	30	
Benzo(b)fluoranthene	1.35	0.17	mg/Kg wet	1.67		81.0	40-140	2.17	30	
Benzo(g,h,i)perylene	1.36	0.17	mg/Kg wet	1.67		81.9	40-140	2.20	30	
Benzo(k)fluoranthene	1.38	0.17	mg/Kg wet	1.67		82.7	40-140	0.315	30	
Chrysene	1.38	0.17	mg/Kg wet	1.67		83.0	40-140	2.50	30	
Dibenz(a,h)anthracene	1.31	0.17	mg/Kg wet	1.67		78.5	40-140	0.711	30	
Fluoranthene	1.28	0.17	mg/Kg wet	1.67		76.8	40-140	0.674	30	
Fluorene	1.26	0.17	mg/Kg wet	1.67		75.5	40-140	2.61	30	
Indeno(1,2,3-cd)pyrene	1.33	0.17	mg/Kg wet	1.67		79.6	40-140	1.02	30	
2-Methylnaphthalene	1.33	0.17	mg/Kg wet	1.67		80.0	40-140	2.05	30	
Naphthalene	1.14	0.17	mg/Kg wet	1.67		68.1	40-140	0.471	30	
Phenanthrene	1.31	0.17	mg/Kg wet	1.67		78.5	40-140	0.382	30	
Pyrene	1.42	0.17	mg/Kg wet	1.67		85.4	40-140	1.00	30	
Surrogate: Nitrobenzene-d5	2.77		mg/Kg wet	3.33		83.2	30-130			
Surrogate: 2-Fluorobiphenyl	2.48		mg/Kg wet	3.33		74.4	30-130			
Surrogate: p-Terphenyl-d14	3.22		mg/Kg wet	3.33		96.7	30-130			

**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.

**CERTIFICATIONS**

**Certified Analyses included in this Report**

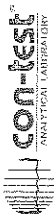
Analyte	Certifications
<i>SW-846 8270D-E in Soil</i>	
Acenaphthene	CT,NY,NH,ME,NC,VA
Acenaphthylene	CT,NY,NH,ME,NC,VA
Anthracene	CT,NY,NH,ME,NC,VA
Benzo(a)anthracene	CT,NY,NH,ME,NC,VA
Benzo(a)pyrene	CT,NY,NH,ME,NC,VA
Benzo(b)fluoranthene	CT,NY,NH,ME,NC,VA
Benzo(g,h,i)perylene	CT,NY,NH,ME,NC,VA
Benzo(k)fluoranthene	CT,NY,NH,ME,NC,VA
Chrysene	CT,NY,NH,ME,NC,VA
Dibenz(a,h)anthracene	CT,NY,NH,ME,NC,VA
Fluoranthene	CT,NY,NH,ME,NC,VA
Fluorene	CT,NY,NH,ME,NC,VA
Indeno(1,2,3-cd)pyrene	CT,NY,NH,ME,NC,VA
2-Methylnaphthalene	CT,NY,NH,ME,NC,VA
Naphthalene	CT,NY,NH,ME,NC,VA
Phenanthrene	CT,NY,NH,ME,NC,VA
Pyrene	CT,NY,NH,ME,NC,VA

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2021
CT	Connecticut Department of Public Health	PH-0165	12/31/2022
NY	New York State Department of Health	10899 NELAP	04/1/2022
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2022
RI	Rhode Island Department of Health	LAO00112	12/30/2021
NC	North Carolina Div. of Water Quality	652	12/31/2021
NJ	New Jersey DEP	MA007 NELAP	06/30/2021
FL	Florida Department of Health	E871027 NELAP	06/30/2021
VT	Vermont Department of Health Lead Laboratory	LL720741	07/30/2021
ME	State of Maine	MA00100	06/9/2021
VA	Commonwealth of Virginia	460217	12/14/2021
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2021
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2021
NC-DW	North Carolina Department of Health	25703	07/31/2021
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2021
MI	Dept. of Env, Great Lakes, and Energy	9100	09/6/2021

39 Spruce Street  
East Longmeadow, MA 01028

Phone: 413-525-2332  
Fax: 413-525-6405  
Email: info@contestlabs.com



CHAIN OF CUSTODY RECORD

ANALYSIS REQUESTED

7-Day PFAS 10-Day (std) 10-Day Due Date:  Field Filtered Lab to Filter

1-Day 2-Day 3-Day 4-Day Due Date:  Field Filtered Lab to Filter

Format: PDF  EXCEL

Other:

CLP Like Data Pkg Required:

Email To: K. SASSON@VERTEXCON.COM

Fax To #:

Address: 1001 WASHINGTON ST 333 BOSTON MA

Phone: 617-275-8407

Project Location: MA Weymouth

Project Number: 67404

Project Manager: K. Sasson

Con-Test Quote Name/Number:

Invoice Recipient: K. Sasson

Sampled By: K. Sasson & J. Golden

Con-Test Work Order #	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE
1	TP-E3-Conf	9/19/21	1045	Comp	S	U	1				
2	TP-E3-Conf	↓	1050	↓	↓	↓					
3	TP-D6-leaf	↓	1100	↓	↓	↓					
4	TP-C6 Conf	↓	1105	↓	↓	↓					

Relinquished by: (signature) [Signature] Date/Time: 4/19/21 1306

Received by: (signature) [Signature] Date/Time: 3/30/21 1306

Relinquished by: (signature) [Signature] Date/Time: 4/19/21 1306

Received by: (signature) [Signature] Date/Time: [Blank]

Relinquished by: (signature) [Signature] Date/Time: [Blank]

Received by: (signature) [Signature] Date/Time: [Blank]

Relinquished by: (signature) [Signature] Date/Time: [Blank]

Received by: (signature) [Signature] Date/Time: [Blank]

Project Entity: Government Federal City  
Municipality: 21 J Brownfield  
MWRA School MBTA  
WRTA  
Other: Chromatogram ALPHA-LAP, LLC

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

2 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)

1 Matrix Codes:  
GW = Ground Water  
WW = Waste Water  
DW = Drinking Water  
A = Air  
S = Soil  
SL = Sludge  
SOL = Solid  
O = Other (please define)

Glassware in the fridge? Y / N  
Glassware in freezer? Y / N  
Prepackaged Cooler? Y / N  
\*Contest is not responsible for missing samples from prepacked coolers

Total Number Of:  
VIALS \_\_\_\_\_  
GLASS \_\_\_\_\_  
PLASTIC \_\_\_\_\_  
BACTERIA \_\_\_\_\_  
ENCORE \_\_\_\_\_

Preservation Code

Client Comments:

Relinquished by: (signature) [Signature] Date/Time: [Blank]

Received by: (signature) [Signature] Date/Time: [Blank]

Relinquished by: (signature) [Signature] Date/Time: [Blank]

Received by: (signature) [Signature] Date/Time: [Blank]

Relinquished by: (signature) [Signature] Date/Time: [Blank]

Received by: (signature) [Signature] Date/Time: [Blank]

Relinquished by: (signature) [Signature] Date/Time: [Blank]

Received by: (signature) [Signature] Date/Time: [Blank]

Project Entity: Government Federal City  
Municipality: 21 J Brownfield  
MWRA School MBTA  
WRTA  
Other: Chromatogram ALPHA-LAP, LLC

Comments:

Disclaimer: Con-Test Labs is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Con Test values your partnership on each project and will try to assist with missing information, but will not be held accountable.

I Have Not Confirmed Sample Container Numbers With Lab Staff Before Relinquishing Over Samples \_\_\_\_\_



**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 Vertex

Received By [Signature] Date 4/19/21 Time 1300

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 # 3 Actual Temp - 3.3  
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 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

Are there Rushes? T

Are there Short Holds? F

Is there enough Volume? T

Is there Headspace where applicable? n/a

Proper Media/Containers Used? T

Were trip blanks received? F

Do all samples have the proper pH? \_\_\_\_\_

Who was notified? \_\_\_\_\_

Who was notified? Ely

Who was notified? \_\_\_\_\_

MS/MSD? F

Is splitting samples required? F

On COC? F

Acid n/a Base n/a

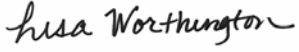
Vials	#	Containers:	#	#	#	#
Unp-		1 Liter Amb.		1 Liter Plastic		16 oz Amb.
HCL-		500 mL Amb.		500 mL Plastic		8oz Amb/Clear
Meoh-		250 mL Amb.		250 mL Plastic		4oz <del>Amb</del> /Clear
Bisulfate-		Flashpoint		Col./Bacteria		2oz <del>Amb</del> /Clear
DI-		Other Glass		Other Plastic		Encore
Thiosulfate-		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, a Pace Analytical Laboratory	Project #: 21D0977				
Project Location: Wayland, MA	RTN:				
This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)] 21D0977-01 thru 21D0977-04					
Matrices: Soil					
<b>CAM Protocol (check all that below)</b>					
8260 VOC CAM II A ( )	7470/7471 Hg CAM IIIB ( )	MassDEP VPH CAM IV A ( )	8082 PCB CAM V A ( )	9014 Total Cyanide/PAC CAM VI A ( )	6860 Perchlorate CAM VIII B ( )
8270 SVOC CAM II B (X)	7010 Metals CAM III C ( )	MassDEP VPH CAM IV C ( )	8081 Pesticides CAM V B ( )	7196 Hex Cr CAM VI B ( )	MassDEP APH CAM IX A ( )
6010 Metals CAM III A ( )	6020 Metals CAM III D ( )	MassDEP EPH CAM IV B ( )	8151 Herbicides CAM V C ( )	8330 Explosives CAM VIII A ( )	TO-15 VOC CAM IX B ( )
<b>Affirmative response to Questions A through F is required for "Presumptive Certainty" status</b>					
<b>A</b>	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?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No <sup>1</sup>		
<b>B</b>	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No <sup>1</sup>		
<b>C</b>	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No <sup>1</sup>		
<b>D</b>	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?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No <sup>1</sup>		
<b>E a</b>	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).	<input type="checkbox"/> Yes	<input type="checkbox"/> No <sup>1</sup>		
<b>E b</b>	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	<input type="checkbox"/> Yes	<input type="checkbox"/> No <sup>1</sup>		
<b>F</b>	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)?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No <sup>1</sup>		
<b>A response to questions G, H and I below is required for "Presumptive Certainty" status</b>					
<b>G</b>	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No <sup>1</sup>		
<b>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.</b>					
<b>H</b>	Were all QC performance standards specified in the CAM protocol(s) achieved?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No <sup>1</sup>		
<b>I</b>	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No <sup>1</sup>		
<sup>1</sup> All Negative responses must be addressed in an attached Environmental Laboratory case narrative.					
<b>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.</b>					
Signature:		Position:	Technical Representative		
Printed Name:	Lisa A. Worthington	Date:	04/20/21		



April 21, 2021

Kristen Sarson  
Vertex Engineering - Boston  
100 North Washington St. Suite 302  
Boston, MA 02114

Project Location: Wayland, MA  
Client Job Number:  
Project Number: 67404  
Laboratory Work Order Number: 21D1038

Enclosed are results of analyses for samples received by the laboratory on April 20, 2021. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jessica L. Hoffman  
Project Manager

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

Vertex Engineering - Boston  
100 North Washington St. Suite 302  
Boston, MA 02114  
ATTN: Kristen Sarson

REPORT DATE: 4/21/2021

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 67404

**ANALYTICAL SUMMARY**

---

WORK ORDER NUMBER: 21D1038

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

PROJECT LOCATION: Wayland, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
TP-A5-Conf	21D1038-01	Soil		SM 2540G SW-846 8270D-E	
TP-C3-Conf	21D1038-02	Soil		SM 2540G SW-846 8270D-E	

**CASE NARRATIVE SUMMARY**

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

For method 8270E, only PAHs were requested and reported.

The results of analyses reported only relate to samples submitted to Con-Test, a Pace 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  
Technical Representative

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

Project Location: Wayland, MA

Sample Description:

Work Order: 21D1038

Date Received: 4/20/2021

Field Sample #: TP-A5-Conf

Sampled: 4/20/2021 09:05

Sample ID: 21D1038-01

Sample Matrix: Soil

## Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	4/20/21	4/21/21 10:46	IMR
Acenaphthylene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	4/20/21	4/21/21 10:46	IMR
Anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	4/20/21	4/21/21 10:46	IMR
Benzo(a)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	4/20/21	4/21/21 10:46	IMR
Benzo(a)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	4/20/21	4/21/21 10:46	IMR
Benzo(b)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	4/20/21	4/21/21 10:46	IMR
Benzo(g,h,i)perylene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	4/20/21	4/21/21 10:46	IMR
Benzo(k)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	4/20/21	4/21/21 10:46	IMR
Chrysene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	4/20/21	4/21/21 10:46	IMR
Dibenz(a,h)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	4/20/21	4/21/21 10:46	IMR
Fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	4/20/21	4/21/21 10:46	IMR
Fluorene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	4/20/21	4/21/21 10:46	IMR
Indeno(1,2,3-cd)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	4/20/21	4/21/21 10:46	IMR
2-Methylnaphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	4/20/21	4/21/21 10:46	IMR
Naphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	4/20/21	4/21/21 10:46	IMR
Phenanthrene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	4/20/21	4/21/21 10:46	IMR
Pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	4/20/21	4/21/21 10:46	IMR
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Nitrobenzene-d5		77.5	30-130					4/21/21 10:46	
2-Fluorobiphenyl		71.4	30-130					4/21/21 10:46	
p-Terphenyl-d14		87.5	30-130					4/21/21 10:46	

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Project Location: Wayland, MA

Sample Description:

Work Order: 21D1038

Date Received: 4/20/2021

Field Sample #: TP-A5-Conf

Sampled: 4/20/2021 09:05

Sample ID: 21D1038-01

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	97.0		% Wt	1		SM 2540G	4/21/21	4/21/21 12:13	YS

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Project Location: Wayland, MA

Sample Description:

Work Order: 21D1038

Date Received: 4/20/2021

Field Sample #: TP-C3-Conf

Sampled: 4/20/2021 09:10

Sample ID: 21D1038-02

Sample Matrix: Soil

## Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	4/20/21	4/21/21 11:10	IMR
Acenaphthylene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	4/20/21	4/21/21 11:10	IMR
Anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	4/20/21	4/21/21 11:10	IMR
Benzo(a)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	4/20/21	4/21/21 11:10	IMR
Benzo(a)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	4/20/21	4/21/21 11:10	IMR
Benzo(b)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	4/20/21	4/21/21 11:10	IMR
Benzo(g,h,i)perylene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	4/20/21	4/21/21 11:10	IMR
Benzo(k)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	4/20/21	4/21/21 11:10	IMR
Chrysene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	4/20/21	4/21/21 11:10	IMR
Dibenz(a,h)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	4/20/21	4/21/21 11:10	IMR
Fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	4/20/21	4/21/21 11:10	IMR
Fluorene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	4/20/21	4/21/21 11:10	IMR
Indeno(1,2,3-cd)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	4/20/21	4/21/21 11:10	IMR
2-Methylnaphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	4/20/21	4/21/21 11:10	IMR
Naphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	4/20/21	4/21/21 11:10	IMR
Phenanthrene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	4/20/21	4/21/21 11:10	IMR
Pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	4/20/21	4/21/21 11:10	IMR
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Nitrobenzene-d5		83.1	30-130					4/21/21 11:10	
2-Fluorobiphenyl		74.5	30-130					4/21/21 11:10	
p-Terphenyl-d14		89.6	30-130					4/21/21 11:10	

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Project Location: Wayland, MA

Sample Description:

Work Order: 21D1038

Date Received: 4/20/2021

**Field Sample #: TP-C3-Conf**

Sampled: 4/20/2021 09:10

**Sample ID: 21D1038-02**

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	96.9		% Wt	1		SM 2540G	4/21/21	4/21/21 12:13	YS



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

<b>Lab Number [Field ID]</b>	<b>Batch</b>	<b>Date</b>
21D1038-01 [TP-A5-Conf]	B280567	04/21/21
21D1038-02 [TP-C3-Conf]	B280567	04/21/21

**Prep Method: SW-846 3546    Analytical Method: SW-846 8270D-E**

<b>Lab Number [Field ID]</b>	<b>Batch</b>	<b>Initial [g]</b>	<b>Final [mL]</b>	<b>Date</b>
21D1038-01 [TP-A5-Conf]	B280507	30.0	1.00	04/20/21
21D1038-02 [TP-C3-Conf]	B280507	30.0	1.00	04/20/21

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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
<b>Batch B280507 - SW-846 3546</b>										
<b>Blank (B280507-BLK1)</b>										
Prepared: 04/20/21 Analyzed: 04/21/21										
Acenaphthene	ND	0.17	mg/Kg wet							
Acenaphthylene	ND	0.17	mg/Kg wet							
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							
Benzo(k)fluoranthene	ND	0.17	mg/Kg wet							
Chrysene	ND	0.17	mg/Kg wet							
Dibenz(a,h)anthracene	ND	0.17	mg/Kg wet							
Fluoranthene	ND	0.17	mg/Kg wet							
Fluorene	ND	0.17	mg/Kg wet							
Indeno(1,2,3-cd)pyrene	ND	0.17	mg/Kg wet							
2-Methylnaphthalene	ND	0.17	mg/Kg wet							
Naphthalene	ND	0.17	mg/Kg wet							
Phenanthrene	ND	0.17	mg/Kg wet							
Pyrene	ND	0.17	mg/Kg wet							
Surrogate: Nitrobenzene-d5	2.55		mg/Kg wet	3.31		76.9	30-130			
Surrogate: 2-Fluorobiphenyl	2.35		mg/Kg wet	3.31		70.9	30-130			
Surrogate: p-Terphenyl-d14	2.90		mg/Kg wet	3.31		87.5	30-130			
<b>LCS (B280507-BS1)</b>										
Prepared: 04/20/21 Analyzed: 04/21/21										
Acenaphthene	1.30	0.17	mg/Kg wet	1.66		78.0	40-140			
Acenaphthylene	1.25	0.17	mg/Kg wet	1.66		75.1	40-140			
Anthracene	1.36	0.17	mg/Kg wet	1.66		81.7	40-140			
Benzo(a)anthracene	1.39	0.17	mg/Kg wet	1.66		83.6	40-140			
Benzo(a)pyrene	1.29	0.17	mg/Kg wet	1.66		77.7	40-140			
Benzo(b)fluoranthene	1.33	0.17	mg/Kg wet	1.66		80.2	40-140			
Benzo(g,h,i)perylene	1.35	0.17	mg/Kg wet	1.66		81.2	40-140			
Benzo(k)fluoranthene	1.31	0.17	mg/Kg wet	1.66		79.1	40-140			
Chrysene	1.36	0.17	mg/Kg wet	1.66		81.6	40-140			
Dibenz(a,h)anthracene	1.31	0.17	mg/Kg wet	1.66		79.0	40-140			
Fluoranthene	1.33	0.17	mg/Kg wet	1.66		80.1	40-140			
Fluorene	1.30	0.17	mg/Kg wet	1.66		78.3	40-140			
Indeno(1,2,3-cd)pyrene	1.37	0.17	mg/Kg wet	1.66		82.5	40-140			
2-Methylnaphthalene	1.41	0.17	mg/Kg wet	1.66		85.0	40-140			
Naphthalene	1.21	0.17	mg/Kg wet	1.66		72.8	40-140			
Phenanthrene	1.34	0.17	mg/Kg wet	1.66		80.9	40-140			
Pyrene	1.38	0.17	mg/Kg wet	1.66		83.1	40-140			
Surrogate: Nitrobenzene-d5	3.00		mg/Kg wet	3.32		90.3	30-130			
Surrogate: 2-Fluorobiphenyl	2.66		mg/Kg wet	3.32		80.0	30-130			
Surrogate: p-Terphenyl-d14	3.15		mg/Kg wet	3.32		94.8	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
<b>Batch B280507 - SW-846 3546</b>										
<b>LCS Dup (B280507-BSD1)</b>										
					Prepared: 04/20/21 Analyzed: 04/21/21					
Acenaphthene	1.29	0.17	mg/Kg wet	1.63		78.9	40-140	0.501	30	
Acenaphthylene	1.26	0.17	mg/Kg wet	1.63		76.8	40-140	0.617	30	
Anthracene	1.37	0.17	mg/Kg wet	1.63		84.0	40-140	1.13	30	
Benzo(a)anthracene	1.41	0.17	mg/Kg wet	1.63		86.3	40-140	1.60	30	
Benzo(a)pyrene	1.32	0.17	mg/Kg wet	1.63		80.8	40-140	2.29	30	
Benzo(b)fluoranthene	1.36	0.17	mg/Kg wet	1.63		83.0	40-140	1.83	30	
Benzo(g,h,i)perylene	1.38	0.17	mg/Kg wet	1.63		84.6	40-140	2.55	30	
Benzo(k)fluoranthene	1.33	0.17	mg/Kg wet	1.63		81.5	40-140	1.39	30	
Chrysene	1.37	0.17	mg/Kg wet	1.63		84.1	40-140	1.27	30	
Dibenz(a,h)anthracene	1.35	0.17	mg/Kg wet	1.63		82.7	40-140	2.91	30	
Fluoranthene	1.34	0.17	mg/Kg wet	1.63		81.9	40-140	0.575	30	
Fluorene	1.32	0.17	mg/Kg wet	1.63		80.5	40-140	1.07	30	
Indeno(1,2,3-cd)pyrene	1.41	0.17	mg/Kg wet	1.63		86.6	40-140	3.20	30	
2-Methylnaphthalene	1.43	0.17	mg/Kg wet	1.63		87.4	40-140	1.09	30	
Naphthalene	1.22	0.17	mg/Kg wet	1.63		74.8	40-140	1.06	30	
Phenanthrene	1.35	0.17	mg/Kg wet	1.63		82.9	40-140	0.796	30	
Pyrene	1.40	0.17	mg/Kg wet	1.63		85.8	40-140	1.48	30	
Surrogate: Nitrobenzene-d5	3.00		mg/Kg wet	3.27		91.7	30-130			
Surrogate: 2-Fluorobiphenyl	2.63		mg/Kg wet	3.27		80.4	30-130			
Surrogate: p-Terphenyl-d14	3.15		mg/Kg wet	3.27		96.3	30-130			

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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 B280567 - % Solids**
**Duplicate (B280567-DUP1)**
**Source: 21D1038-01**

Prepared &amp; Analyzed: 04/21/21

% Solids	97.2		% Wt			97.0		0.148	10	
----------	------	--	------	--	--	------	--	-------	----	--

**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.

**CERTIFICATIONS**
**Certified Analyses included in this Report**

Analyte	Certifications
<i>SW-846 8270D-E in Soil</i>	
Acenaphthene	CT,NY,NH,ME,NC,VA
Acenaphthylene	CT,NY,NH,ME,NC,VA
Anthracene	CT,NY,NH,ME,NC,VA
Benzo(a)anthracene	CT,NY,NH,ME,NC,VA
Benzo(a)pyrene	CT,NY,NH,ME,NC,VA
Benzo(b)fluoranthene	CT,NY,NH,ME,NC,VA
Benzo(g,h,i)perylene	CT,NY,NH,ME,NC,VA
Benzo(k)fluoranthene	CT,NY,NH,ME,NC,VA
Chrysene	CT,NY,NH,ME,NC,VA
Dibenz(a,h)anthracene	CT,NY,NH,ME,NC,VA
Fluoranthene	CT,NY,NH,ME,NC,VA
Fluorene	CT,NY,NH,ME,NC,VA
Indeno(1,2,3-cd)pyrene	CT,NY,NH,ME,NC,VA
2-Methylnaphthalene	CT,NY,NH,ME,NC,VA
Naphthalene	CT,NY,NH,ME,NC,VA
Phenanthrene	CT,NY,NH,ME,NC,VA
Pyrene	CT,NY,NH,ME,NC,VA

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2021
CT	Connecticut Department of Public Health	PH-0165	12/31/2022
NY	New York State Department of Health	10899 NELAP	04/1/2022
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2022
RI	Rhode Island Department of Health	LAO00112	12/30/2021
NC	North Carolina Div. of Water Quality	652	12/31/2021
NJ	New Jersey DEP	MA007 NELAP	06/30/2021
FL	Florida Department of Health	E871027 NELAP	06/30/2021
VT	Vermont Department of Health Lead Laboratory	LL720741	07/30/2021
ME	State of Maine	MA00100	06/9/2021
VA	Commonwealth of Virginia	460217	12/14/2021
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2021
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2021
NC-DW	North Carolina Department of Health	25703	07/31/2021
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2021
MI	Dept. of Env, Great Lakes, and Energy	9100	09/6/2021

21D1038

Doc # 381 Rev 2\_06262019



Phone: 413-525-2332  
Fax: 413-525-6405  
Email: info@contestlabs.com

39 Spruce Street  
East Longmeadow, MA 01028

CHAIN OF CUSTODY RECORD

ANALYSIS REQUESTED

Address: 100 N. Washington St. 302 Boston MA  
Phone: 617-275-5847  
Project Location: Weyland MA  
Project Number: 61904  
Project Manager: K. Sarson  
Con-Test Quote Name/Number:  
Invoice Recipient: K. Sarson  
Sampled By: J. Golden

7-Day PFAS 10-Day (std) 10-Day Due Date: Field Filtered Lab to Filter  
1-Day 3-Day 4-Day Field Filtered Lab to Filter  
Format: PDF X EXCEL X  
Other: Equis  
CLP Like Data Pkg Required:  
Email To: K.Sarson@vertexeng.com  
Fax To #:

Con-Test Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE
1	TP-A5-Conf	4/20/10 0905		Comp	S	U	1				
2	TP-C3-Conf	4/20/10 0910		Comp	S	U	1				

Relinquished by: (signature) Date/Time: 4/20/10 1451  
Received by: (signature) Date/Time: 4/20/10 1451  
Relinquished by: (signature) Date/Time: 4/20/10 1735  
Received by: (signature) Date/Time: 4/20/10 1735  
Relinquished by: (signature) Date/Time: 4/20/10 1735  
Received by: (signature) Date/Time: 4/20/10 1735

Client Comments:  
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

1 Matrix Codes:  
GW = Ground Water  
WW = Waste Water  
DW = Drinking Water  
A = Air  
S = Soil  
SL = Sludge  
SOL = Solid  
O = Other (please define)

2 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)

3 PCB ONLY:  
Soxhlet  
Non Soxhlet

4 NELAP and AHA-LAP, LLC Accredited  
Other  
Chromatogram  
AHA-LAP, LLC

5 MWRA School MBTA  
Municipality 21 J Brownfield  
Government Federal City

6 WRTA  
Project Entity

7 Total Number Of:  
VIALS  
GLASS  
PLASTIC  
BACTERIA  
ENCORE

8 Preservation Code

9 Glassware in the fridge? Y / N  
Glassware in freezer? Y / N  
Prepackaged Cooler? Y / N  
\*Context is not responsible for missing samples from prepacked coolers.

Disclaimer: Con-Test Labs is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Con-Test values your partnership on each project and will try to assist with missing information, but will not be held accountable.

I Have Not Confirmed Sample Container Numbers With Lab Staff Before Relinquishing Over Samples \_\_\_\_\_



**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 Vertex  
 Received By CA Date 9/20/21 Time 1735  
 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 # 2 Actual Temp - 3.3  
 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 F  
 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? Christian  
 Are there Short Holds? F Who was notified? \_\_\_\_\_  
 Is there enough Volume? T  
 Is there Headspace where applicable? NA 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? NA Acid \_\_\_\_\_ Base \_\_\_\_\_

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-		Flashpoint		Col./Bacteria		2oz Amb/Clear
DI-		Other Glass		Other Plastic		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:



April 27, 2021

Kristen Sarson  
Vertex Engineering - Boston  
100 North Washington St. Suite 302  
Boston, MA 02114

Project Location: Wayland, MA  
Client Job Number:  
Project Number: 67404  
Laboratory Work Order Number: 21D1355

Enclosed are results of analyses for samples received by the laboratory on April 26, 2021. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jessica L. Hoffman  
Project Manager

## Table of Contents

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

Vertex Engineering - Boston  
100 North Washington St. Suite 302  
Boston, MA 02114  
ATTN: Kristen Sarson

REPORT DATE: 4/27/2021

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 67404

**ANALYTICAL SUMMARY**

---

WORK ORDER NUMBER: 21D1355

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

PROJECT LOCATION: Wayland, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
TP-E7-Conf	21D1355-01	Soil		SM 2540G SW-846 6010D	

**CASE NARRATIVE SUMMARY**

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

The results of analyses reported only relate to samples submitted to Con-Test, a Pace 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  
Technical Representative

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

Project Location: Wayland, MA

Sample Description:

Work Order: 21D1355

Date Received: 4/26/2021

Field Sample #: TP-E7-Conf

Sampled: 4/26/2021 10:55

Sample ID: 21D1355-01

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Lead	3.4	0.50	mg/Kg dry	1		SW-846 6010D	4/27/21	4/27/21 12:42	AJL

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

Project Location: Wayland, MA

Sample Description:

Work Order: 21D1355

Date Received: 4/26/2021

Field Sample #: TP-E7-Conf

Sampled: 4/26/2021 10:55

Sample ID: 21D1355-01

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	95.9		% Wt	1		SM 2540G	4/26/21	4/27/21 7:58	CAH

---

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### Sample Extraction Data

**Prep Method: % Solids    Analytical Method: SM 2540G**

Lab Number [Field ID]	Batch	Date
21D1355-01 [TP-E7-Conf]	B280919	04/26/21

**Prep Method: SW-846 3050B    Analytical Method: SW-846 6010D**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
21D1355-01 [TP-E7-Conf]	B280926	1.58	50.0	04/27/21

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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
<b>Batch B280926 - SW-846 3050B</b>										
<b>Blank (B280926-BLK1)</b>				Prepared & Analyzed: 04/27/21						
Lead	ND	0.49	mg/Kg wet							
<b>LCS (B280926-BS1)</b>				Prepared & Analyzed: 04/27/21						
Lead	126	1.5	mg/Kg wet	140		90.1	82.9-117.1			
<b>LCS Dup (B280926-BSD1)</b>				Prepared & Analyzed: 04/27/21						
Lead	136	1.5	mg/Kg wet	140		97.0	82.9-117.1	7.40	30	
<b>Reference (B280926-SRM1) MRL Check</b>				Prepared & Analyzed: 04/27/21						
Lead	0.400	0.48	mg/Kg wet	0.478		83.6	80-120			



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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 B280919 - % Solids**
**Duplicate (B280919-DUP1)**
**Source: 21D1355-01**

Prepared: 04/26/21 Analyzed: 04/27/21

% Solids	95.6		% Wt			95.9		0.296	10	
----------	------	--	------	--	--	------	--	-------	----	--

**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.

**CERTIFICATIONS**

**Certified Analyses included in this Report**

Analyte	Certifications
---------	----------------

*SW-846 6010D in Soil*

Lead CT,NH,NY,AIHA,ME,VA,NC

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2021
CT	Connecticut Department of Public Health	PH-0165	12/31/2022
NY	New York State Department of Health	10899 NELAP	04/1/2022
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2022
RI	Rhode Island Department of Health	LAO00112	12/30/2021
NC	North Carolina Div. of Water Quality	652	12/31/2021
NJ	New Jersey DEP	MA007 NELAP	06/30/2021
FL	Florida Department of Health	E871027 NELAP	06/30/2021
VT	Vermont Department of Health Lead Laboratory	LL720741	07/30/2021
ME	State of Maine	MA00100	06/9/2021
VA	Commonwealth of Virginia	460217	12/14/2021
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2021
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2021
NC-DW	North Carolina Department of Health	25703	07/31/2021
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2021
MI	Dept. of Env, Great Lakes, and Energy	9100	09/6/2021

21D1355



Phone: 413-525-2332  
Fax: 413-525-6405  
Email: info@contestlabs.com

http://www.contestlabs.com

CHAIN OF CUSTODY RECORD

39 Spruce Street  
East Longmeadow, MA 01028

Doc # 381 Rev 2\_06262019

Page 1 of 1

Vertex  
Address: 100 N. Washington St. Suite 302 Boston, MA  
Phone: 617-275-8467  
Project Location: Wayland, MA  
Project Number: 67404  
Project Manager: K. Sarson  
Con-Test Quote Name/Number:  
Invoice Recipient: K. Sarson  
Sampled By: J. Golden

7-Day  10-Day  Field Filtered   
PFAS 10-Day (std)  Due Date: Lab to Filter   
1-Day  3-Day  Field Filtered   
2-Day  4-Day  Lab to Filter   
Format: PDF  EXCEL   
Other: Equis  
CLP Like Data Pkg Required:  
Email To: ksarson@vertexeng.com  
Fax To #:

ANALYSIS REQUESTED  
Total Lead  
TCLP Chromium  
Chlorinated Pest & Herbicides

Con-Test Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE
1	TP-E7-COMP	4/26/21 11:55	11:55	COMP	S						
	Treated E7-1	4/26/21 13:00	13:00	COMP	S						
	Treated E7-2	4/26/21 13:05	13:05	COMP	S						

hold samples are on  
21D1356 JLH  
4/27/2021

Preservation Code  
Total Number Of:  
VIALS 3  
GLASS 3  
PLASTIC  
BACTERIA  
ENCORE  
Glassware in the fridge? Y / N  
Glassware in freezer? Y / N  
Prepackaged Cooler? Y / N  
\*Contest is not responsible for missing samples from prepacked coolers

1 Matrix Codes:  
GW = Ground Water  
WW = Waste Water  
DW = Drinking Water  
A = Air  
S = Soil  
SL = Sludge  
SOL = Solid  
O = Other (please define)  
2 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)

Relinquished by: (signature) Date/Time: 4/26/21 1401  
Received by: (signature) Date/Time: 4/26/21 1401  
Relinquished by: (signature) Date/Time: 4/26/21 1740  
Received by: (signature) Date/Time: 4/26/21 1740  
Relinquished by: (signature) Date/Time:  
Received by: (signature) Date/Time:  
Relinquished by: (signature) Date/Time:  
Received by: (signature) Date/Time:

Client Comments: Treated E7-1 & Treated E7-2 samples on hold please  
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  
NELAC and AIHA-LAP, LLC Accredited  
Project Entity: Government  Municipality  MWRA  WRTA   
Federal  21 J  School   
City  Brownfield  MBTA   
Other:  Chromatogram  Soxhlet  
 AIHA-LAP, LLC  Non Soxhlet

Comments:

Disclaimer: Con-Test Labs is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Con-Test values your partnership on each project and will try to assist with missing information, but will not be held accountable.

I Have Not Confirmed Sample Container Numbers With Lab Staff Before Relinquishing Over Samples \_\_\_\_\_



**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 Vertex

Received By BJM Date 4/26/21 Time 17:40

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

Were samples within Temperature? 2-6°C T By Gun # 3 Actual Temp - 4.5  
 By Blank # \_\_\_\_\_ Actual Temp - \_\_\_\_\_

Was Custody Seal Intact? T Were Samples Tampered with? F  
 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 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? BJM T Who was notified? \_\_\_\_\_  
 Are there Short Holds? F Who was notified? \_\_\_\_\_

Is there enough Volume? T

Is there Headspace where applicable? N/A MS/MSD? F

Proper Media/Containers Used? \_\_\_\_\_ Is splitting samples required? \_\_\_\_\_  
 Were trip blanks received? \_\_\_\_\_ On COC? \_\_\_\_\_

Do all samples have the proper pH? \_\_\_\_\_ Acid \_\_\_\_\_ Base \_\_\_\_\_

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-		Flashpoint		Col./Bacteria	2oz Amb/Clear
DI-		Other Glass		Other Plastic	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:



*CERTIFICATE OF ANALYSIS*

Steve Winters  
United Retek  
47 South Maple Street  
Bellingham, MA 02019

**RE: Wayland Firing Range (21-08)**  
**ESS Laboratory Work Order Number: 21E0118**

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard  
Laboratory Director

**REVIEWED**  
*By ESS Laboratory at 2:11 pm, May 10, 2021*

**Analytical Summary**

The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.



*CERTIFICATE OF ANALYSIS*

Client Name: United Retek  
Client Project ID: Wayland Firing Range

ESS Laboratory Work Order: 21E0118

**SAMPLE RECEIPT**

The following samples were received on May 05, 2021 for the analyses specified on the enclosed Chain of Custody Record.

<b>Lab Number</b>	<b>Sample Name</b>	<b>Matrix</b>	<b>Analysis</b>
21E0118-01	7 Firing Range	Soil	1311, 1311/6010C, 3005
21E0118-02	8 Firing Range	Soil	1311, 1311/6010C, 3005
21E0118-03	9 Firing Range	Soil	1311, 1311/6010C, 3005
21E0118-04	10 Firing Range	Soil	1311, 1311/6010C, 3005
21E0118-05	11 Firing Range	Soil	1311, 1311/6010C, 3005



CERTIFICATE OF ANALYSIS

Client Name: United Retek  
Client Project ID: Wayland Firing Range

ESS Laboratory Work Order: 21E0118

**PROJECT NARRATIVE**

**No unusual observations noted.**

**End of Project Narrative.**

**DATA USABILITY LINKS**

*To ensure you are viewing the most current version of the documents below, please clear your internet cookies for [www.ESSLaboratory.com](http://www.ESSLaboratory.com). Consult your IT Support personnel for information on how to clear your internet cookies.*

[Definitions of Quality Control Parameters](#)

[Semivolatile Organics Internal Standard Information](#)

[Semivolatile Organics Surrogate Information](#)

[Volatile Organics Internal Standard Information](#)

[Volatile Organics Surrogate Information](#)

[EPH and VPH Alkane Lists](#)





*CERTIFICATE OF ANALYSIS*

Client Name: United Retek  
Client Project ID: Wayland Firing Range

ESS Laboratory Work Order: 21E0118

**CURRENT SW-846 METHODOLOGY VERSIONS**

**Analytical Methods**

- 1010A - Flashpoint
- 6010C - ICP
- 6020A - ICP MS
- 7010 - Graphite Furnace
- 7196A - Hexavalent Chromium
- 7470A - Aqueous Mercury
- 7471B - Solid Mercury
- 8011 - EDB/DBCP/TCP
- 8015C - GRO/DRO
- 8081B - Pesticides
- 8082A - PCB
- 8100M - TPH
- 8151A - Herbicides
- 8260B - VOA
- 8270D - SVOA
- 8270D SIM - SVOA Low Level
- 9014 - Cyanide
- 9038 - Sulfate
- 9040C - Aqueous pH
- 9045D - Solid pH (Corrosivity)
- 9050A - Specific Conductance
- 9056A - Anions (IC)
- 9060A - TOC
- 9095B - Paint Filter
- MADEP 04-1.1 - EPH
- MADEP 18-2.1 - VPH

**Prep Methods**

- 3005A - Aqueous ICP Digestion
- 3020A - Aqueous Graphite Furnace / ICP MS Digestion
- 3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
- 3060A - Solid Hexavalent Chromium Digestion
- 3510C - Separatory Funnel Extraction
- 3520C - Liquid / Liquid Extraction
- 3540C - Manual Soxhlet Extraction
- 3541 - Automated Soxhlet Extraction
- 3546 - Microwave Extraction
- 3580A - Waste Dilution
- 5030B - Aqueous Purge and Trap
- 5030C - Aqueous Purge and Trap
- 5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.



*CERTIFICATE OF ANALYSIS*

Client Name: United Retek  
Client Project ID: Wayland Firing Range  
Client Sample ID: 7 Firing Range  
Date Sampled: 05/04/21 00:00  
Percent Solids: N/A

ESS Laboratory Work Order: 21E0118  
ESS Laboratory Sample ID: 21E0118-01  
Sample Matrix: Soil  
Units: mg/L

Extraction Method: 3005A TCLP

**1311 TCLP Metals**

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>TCLP Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>I/V</u>	<u>F/V</u>	<u>Batch</u>
Lead	ND (0.050)		1311/6010C		1	KJK	05/07/21 16:54	50	50	DE10456



*CERTIFICATE OF ANALYSIS*

Client Name: United Retek  
Client Project ID: Wayland Firing Range  
Client Sample ID: 7 Firing Range  
Date Sampled: 05/04/21 00:00  
Percent Solids: N/A  
Initial Volume: 100  
Final Volume: 2000  
Extraction Method: 1311

ESS Laboratory Work Order: 21E0118  
ESS Laboratory Sample ID: 21E0118-01  
Sample Matrix: Soil  
Units: °C  
Analyst: WRM  
Prepared: 5/5/21 22:02

**TCLP Extraction by 1311**

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Batch</u>
Temperature (Min C)	20.4 (N/A)		1311		1	WRM	05/06/21 15:15	DE10562
Temperature (Max C)	23.1 (N/A)		1311		1	WRM	05/06/21 15:15	DE10562
Temperature (Range)	Temperature is not within 23 +/-2 °C. (N/A)							



*CERTIFICATE OF ANALYSIS*

Client Name: United Retek  
Client Project ID: Wayland Firing Range  
Client Sample ID: 8 Firing Range  
Date Sampled: 05/04/21 00:00  
Percent Solids: N/A

ESS Laboratory Work Order: 21E0118  
ESS Laboratory Sample ID: 21E0118-02  
Sample Matrix: Soil  
Units: mg/L

Extraction Method: 3005A TCLP

**1311 TCLP Metals**

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>TCLP Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>I/V</u>	<u>F/V</u>	<u>Batch</u>
Lead	ND (0.050)		1311/6010C		1	KJK	05/07/21 17:02	50	50	DE10456



*CERTIFICATE OF ANALYSIS*

Client Name: United Retek  
Client Project ID: Wayland Firing Range  
Client Sample ID: 8 Firing Range  
Date Sampled: 05/04/21 00:00  
Percent Solids: N/A  
Initial Volume: 100  
Final Volume: 2000  
Extraction Method: 1311

ESS Laboratory Work Order: 21E0118  
ESS Laboratory Sample ID: 21E0118-02  
Sample Matrix: Soil  
Units: °C  
Analyst: WRM  
Prepared: 5/5/21 22:02

**TCLP Extraction by 1311**

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Batch</u>
Temperature (Min C)	20.4 (N/A)		1311		1	WRM	05/06/21 15:15	DE10562
Temperature (Max C)	23.1 (N/A)		1311		1	WRM	05/06/21 15:15	DE10562
Temperature (Range)	Temperature is not within 23 +/-2 °C. (N/A)							



*CERTIFICATE OF ANALYSIS*

Client Name: United Retek  
Client Project ID: Wayland Firing Range  
Client Sample ID: 9 Firing Range  
Date Sampled: 05/04/21 00:00  
Percent Solids: N/A

ESS Laboratory Work Order: 21E0118  
ESS Laboratory Sample ID: 21E0118-03  
Sample Matrix: Soil  
Units: mg/L

Extraction Method: 3005A TCLP

**1311 TCLP Metals**

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>TCLP Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>I/V</u>	<u>F/V</u>	<u>Batch</u>
Lead	ND (0.050)		1311/6010C		1	KJK	05/07/21 17:04	50	50	DE10456



*CERTIFICATE OF ANALYSIS*

Client Name: United Retek  
Client Project ID: Wayland Firing Range  
Client Sample ID: 9 Firing Range  
Date Sampled: 05/04/21 00:00  
Percent Solids: N/A  
Initial Volume: 100  
Final Volume: 2000  
Extraction Method: 1311

ESS Laboratory Work Order: 21E0118  
ESS Laboratory Sample ID: 21E0118-03  
Sample Matrix: Soil  
Units: °C  
Analyst: WRM  
Prepared: 5/5/21 22:02

**TCLP Extraction by 1311**

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Batch</u>
Temperature (Min C)	20.4 (N/A)		1311		1	WRM	05/06/21 15:15	DE10562
Temperature (Max C)	23.1 (N/A)		1311		1	WRM	05/06/21 15:15	DE10562
Temperature (Range)	Temperature is not within 23 +/-2 °C. (N/A)							



*CERTIFICATE OF ANALYSIS*

Client Name: United Retek  
Client Project ID: Wayland Firing Range  
Client Sample ID: 10 Firing Range  
Date Sampled: 05/04/21 00:00  
Percent Solids: N/A

ESS Laboratory Work Order: 21E0118  
ESS Laboratory Sample ID: 21E0118-04  
Sample Matrix: Soil  
Units: mg/L

Extraction Method: 3005A TCLP

**1311 TCLP Metals**

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>TCLP Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>I/V</u>	<u>F/V</u>	<u>Batch</u>
Lead	ND (0.050)		1311/6010C		1	KJK	05/07/21 17:06	50	50	DE10456





*CERTIFICATE OF ANALYSIS*

Client Name: United Retek  
Client Project ID: Wayland Firing Range  
Client Sample ID: 10 Firing Range  
Date Sampled: 05/04/21 00:00  
Percent Solids: N/A  
Initial Volume: 100  
Final Volume: 2000  
Extraction Method: 1311

ESS Laboratory Work Order: 21E0118  
ESS Laboratory Sample ID: 21E0118-04  
Sample Matrix: Soil  
Units: °C  
Analyst: WRM  
Prepared: 5/5/21 22:02

**TCLP Extraction by 1311**

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Batch</u>
Temperature (Min C)	20.4 (N/A)		1311		1	WRM	05/06/21 15:15	DE10562
Temperature (Max C)	23.1 (N/A)		1311		1	WRM	05/06/21 15:15	DE10562
Temperature (Range)	Temperature is not within 23 +/-2 °C. (N/A)							



*CERTIFICATE OF ANALYSIS*

Client Name: United Retek  
Client Project ID: Wayland Firing Range  
Client Sample ID: 11 Firing Range  
Date Sampled: 05/04/21 00:00  
Percent Solids: N/A

ESS Laboratory Work Order: 21E0118  
ESS Laboratory Sample ID: 21E0118-05  
Sample Matrix: Soil  
Units: mg/L

Extraction Method: 3005A TCLP

**1311 TCLP Metals**

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>TCLP Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>I/V</u>	<u>F/V</u>	<u>Batch</u>
Lead	ND (0.050)		1311/6010C		1	KJK	05/07/21 17:09	50	50	DE10456



*CERTIFICATE OF ANALYSIS*

Client Name: United Retek  
Client Project ID: Wayland Firing Range  
Client Sample ID: 11 Firing Range  
Date Sampled: 05/04/21 00:00  
Percent Solids: N/A  
Initial Volume: 100  
Final Volume: 2000  
Extraction Method: 1311

ESS Laboratory Work Order: 21E0118  
ESS Laboratory Sample ID: 21E0118-05  
Sample Matrix: Soil  
Units: °C  
Analyst: WRM  
Prepared: 5/5/21 22:02

**TCLP Extraction by 1311**

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Batch</u>
Temperature (Min C)	20.4 (N/A)		1311		1	WRM	05/06/21 15:15	DE10562
Temperature (Max C)	23.1 (N/A)		1311		1	WRM	05/06/21 15:15	DE10562
Temperature (Range)	Temperature is not within 23 +/-2 °C. (N/A)							



*CERTIFICATE OF ANALYSIS*

Client Name: United Retek  
Client Project ID: Wayland Firing Range

ESS Laboratory Work Order: 21E0118

**Quality Control Data**

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
<b>1311 TCLP Metals</b>										
<b>Batch DE10456 - 3005A_TCLP</b>										
<b>Blank</b>										
Lead	ND	0.050	mg/L							
<b>Blank</b>										
Lead	ND	0.050	mg/L							
<b>LCS</b>										
Lead	0.462	0.050	mg/L	0.5000		92	80-120			
<b>LCS Dup</b>										
Lead	0.470	0.050	mg/L	0.5000		94	80-120	2	20	



*CERTIFICATE OF ANALYSIS*

Client Name: United Retek  
Client Project ID: Wayland Firing Range

ESS Laboratory Work Order: 21E0118

**Notes and Definitions**

- Z18 Temperature is not within 23 +/- 2 °C.
- U Analyte included in the analysis, but not detected
- ND Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference
- MDL Method Detection Limit
- MRL Method Reporting Limit
- LOD Limit of Detection
- LOQ Limit of Quantitation
- DL Detection Limit
- I/V Initial Volume
- F/V Final Volume
- § Subcontracted analysis; see attached report
- 1 Range result excludes concentrations of surrogates and/or internal standards eluting in that range.
- 2 Range result excludes concentrations of target analytes eluting in that range.
- 3 Range result excludes the concentration of the C9-C10 aromatic range.
- Avg Results reported as a mathematical average.
- NR No Recovery
- [CALC] Calculated Analyte
- SUB Subcontracted analysis; see attached report
- RL Reporting Limit
- EDL Estimated Detection Limit
- MF Membrane Filtration
- MPN Most Probably Number
- TNTC Too numerous to Count
- CFU Colony Forming Units



*CERTIFICATE OF ANALYSIS*

Client Name: United Retek  
Client Project ID: Wayland Firing Range

ESS Laboratory Work Order: 21E0118

**ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS**

**ENVIRONMENTAL**

Rhode Island Potable and Non Potable Water: LAI00179

<http://www.health.ri.gov/find/labs/analytical/ESS.pdf>

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750

[http://www.ct.gov/dph/lib/dph/environmental\\_health/environmental\\_laboratories/pdf/OutofStateCommercialLaboratories.pdf](http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf)

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002

<http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml>

Massachusetts Potable and Non Potable Water: M-RI002

<http://public.dep.state.ma.us/Labcert/Labcert.aspx>

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424

<http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm>

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313

<http://www.wadsworth.org/labcert/elap/comm.html>

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006

[http://datamine2.state.nj.us/DEP\\_OPRA/OpraMain/pi\\_main?mode=pi\\_by\\_site&sort\\_order=PI\\_NAMEA&Select+a+Site:=58715](http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715)

United States Department of Agriculture Soil Permit: P330-12-00139

Pennsylvania: 68-01752

<http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx>

## ESS Laboratory Sample and Cooler Receipt Checklist

Client: United Retek - TB  
 Shipped/Delivered Via: ESS Courier

ESS Project ID: 21E0118  
 Date Received: 5/5/2021  
 Project Due Date: 5/7/2021  
 Days for Project: 2 Day

1. Air bill manifest present?  No  
 Air No.: NA
2. Were custody seals present?  No
3. Is radiation count <100 CPM?  Yes
4. Is a Cooler Present?  Yes  
 Temp: 3.9 Iced with: Ice
5. Was COC signed and dated by client?  Yes

6. Does COC match bottles?  Yes
7. Is COC complete and correct?  Yes
8. Were samples received intact?  Yes
9. Were labs informed about short holds & rushes?  Yes /  No /  NA
10. Were any analyses received outside of hold time?  Yes /  No

11. Any Subcontracting needed?  Yes /  No  
 ESS Sample IDs: \_\_\_\_\_  
 Analysis: \_\_\_\_\_  
 TAT: \_\_\_\_\_

12. Were VOAs received?  Yes /  No  
 a. Air bubbles in aqueous VOAs?  Yes /  No  
 b. Does methanol cover soil completely?  Yes /  No /  NA

13. Are the samples properly preserved?  Yes /  No  
 a. If metals preserved upon receipt: Date: \_\_\_\_\_ Time: \_\_\_\_\_ By: \_\_\_\_\_  
 b. Low Level VOA vials frozen: Date: \_\_\_\_\_ Time: \_\_\_\_\_ By: \_\_\_\_\_

Sample Receiving Notes:

\_\_\_\_\_

\_\_\_\_\_

14. Was there a need to contact Project Manager?  Yes /  No  
 a. Was there a need to contact the client?  Yes /  No  
 Who was contacted? \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_ By: \_\_\_\_\_

Sample Number	Container ID	Proper Container	Air Bubbles Present	Sufficient Volume	Container Type	Preservative	Record pH (Cyanide and 608 Pesticides)
1	162072	Yes	N/A	Yes	8 oz jar	NP	
2	162073	Yes	N/A	Yes	8 oz jar	NP	
3	162074	Yes	N/A	Yes	8 oz jar	NP	
4	162075	Yes	N/A	Yes	8 oz jar	NP	
5	162076	Yes	N/A	Yes	8 oz jar	NP	

**2nd Review**

- Were all containers scanned into storage/lab? Initials TD
- Are barcode labels on correct containers?  Yes /  No
- Are all Flashpoint stickers attached/container ID # circled?  Yes /  No /  NA
- Are all Hex Chrome stickers attached?  Yes /  No /  NA
- Are all QC stickers attached?  Yes /  No /  NA
- Are VOA stickers attached if bubbles noted?  Yes /  No

Completed By: Taylor Davis Date & Time: 5/5/21 2030

Reviewed \_\_\_\_\_

# ESS Laboratory Sample and Cooler Receipt Checklist

Client: United Retek - TB

ESS Project ID: 21E0118

Date Received: 5/5/2021

By: 

Date & Time: 5/5/21 2058





185 Frances Avenue  
 Cranston, RI 02921  
 Phone: 401-461-7181  
 Fax: 401-461-4486  
 www.esslaboratory.com

**CHAIN OF CUSTODY**

ESS Lab # **Z1E018** Page **1** of **1**

**ELECTRONIC DELIVERABLES (Final Reports are PDF)**

Limit Checker  State Forms  EQUIS  
 Excel  Hard Copy  Enviro Data  
 CLP-Like Package  Other (Specify) →

Turn Time  >5  5  4  3  2  1  Same Day

Regulatory State: \_\_\_\_\_ Criteria: \_\_\_\_\_

Is this project for any of the following?:

CT RCP  MA MCP  RGP  Permit  401 WQ

**CLIENT INFORMATION** **PROJECT INFORMATION** **REQUESTED ANALYSES**

Client: **UNITED RETEK CORP.**  
 Address: **47 SOUTH MAPLE ST. BELLINGHAM MA 02019**  
 Phone: **508-478-5500**  
 Email Distribution List: **EDDIE@UNITED RETEK.COM**  
**RYAN@RETEK.COM**  
**STEVE@UNITEDRETEK.COM**

Project Name: **WAYLAND FIRING RANGE**  
 Project Location: **WAYLAND**  
 Project Number: **21-988**  
 Project Manager: **N/A**  
 Bill to: **UNITED RETEK**  
 PO#: **N/A**  
 Quote#: **N/A**

Client acknowledges that sampling is compliant with all EPA / State regulatory programs

**TCLPPB**

Total Number of Bottles

ESS Lab ID	Collection Date	Collection Time	Sample Type	Sample Matrix	Sample ID	Requested Analyses	Total Number of Bottles
1	5-4-21	AM	C	S	#7 FIRING RANGE	X	
2	↓	↓	↓	↓	#8	X	
3	↓	↓	↓	↓	#9	X	
4	↓	↓	↓	↓	#10	X	
5	↓	↓	↓	↓	#11	X	

Container Type: AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubitainer J-Jar O-Other P-Poly S-Sterile V-Vial

Container Volume: 1-100 mL 2-2.5 gal 3-250 mL 4-300 mL 5-500 mL 6-1L 7-VOA 8-2 oz 9-4 oz 10-8 oz 11-Other\*

Preservation Code: 1-Non Preserved 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-Methanol 7-Na2S2O3 8-ZnAce, NaOH 9-NH4Cl 10-DI H2O 11-Other\*

Sampled by: \_\_\_\_\_

Chain needs to be filled out neatly and completely for on time delivery.

Laboratory Use Only

Cooler Temperature (°C): **3.9**  
**1C**

Comments: \* Please specify "Other" preservative and containers types in this space

All samples submitted are subject to ESS Laboratory's payment terms and conditions.

Dissolved Filtration  Lab Filter

Relinquished by (Signature)	Date	Time	Received by (Signature)	Relinquished by (Signature)	Date	Time	Received by (Signature)
<i>[Signature]</i>	5-5-21	10:50 A.M.	<i>[Signature]</i>	<i>[Signature]</i>	5/5/21	18:00	<i>[Signature]</i>

May 7, 2021

Kristen Sarson  
Vertex Engineering - Boston  
100 North Washington St. Suite 302  
Boston, MA 02114

Project Location: Wayland, MA  
Client Job Number:  
Project Number: 67404  
Laboratory Work Order Number: 21E0205

Enclosed are results of analyses for samples received by the laboratory on May 5, 2021. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jessica L. Hoffman  
Project Manager

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

Vertex Engineering - Boston  
 100 North Washington St. Suite 302  
 Boston, MA 02114  
 ATTN: Kristen Sarson

REPORT DATE: 5/7/2021

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 67404

**ANALYTICAL SUMMARY**

WORK ORDER NUMBER: 21E0205

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

PROJECT LOCATION: Wayland, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
V-401-FR-CONF-W	21E0205-01	Soil		SM 2540G SW-846 6010D	
V-402-FR-CONF-W	21E0205-02	Soil		SM 2540G SW-846 6010D	
V-403-FR-CONF-W	21E0205-03	Soil		SM 2540G SW-846 6010D	
V-404-FR-CONF-N	21E0205-04	Soil		SM 2540G SW-846 6010D	
V-405-FR-CONF-N	21E0205-05	Soil		SM 2540G SW-846 6010D	
V-406-FR-CONF-N	21E0205-06	Soil		SM 2540G SW-846 6010D	
V-407-FR-CONF-E	21E0205-07	Soil		SM 2540G SW-846 6010D	
V-408-FR-CONF-S	21E0205-08	Soil		SM 2540G SW-846 6010D	
V-409-FR-CONF-S	21E0205-09	Soil		SM 2540G SW-846 6010D	
V-410-FR-CONF-S	21E0205-10	Soil		SM 2540G SW-846 6010D	

**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 Pb was requested and reported.

The results of analyses reported only relate to samples submitted to Con-Test, a Pace 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  
Technical Representative

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

Project Location: Wayland, MA

Sample Description:

Work Order: 21E0205

Date Received: 5/5/2021

Field Sample #: V-401-FR-CONF-W

Sampled: 5/4/2021 13:40

Sample ID: 21E0205-01

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Lead	14000	7.4	mg/Kg dry	10		SW-846 6010D	5/6/21	5/6/21 13:22	AJL

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

Project Location: Wayland, MA

Sample Description:

Work Order: 21E0205

Date Received: 5/5/2021

**Field Sample #: V-401-FR-CONF-W**

Sampled: 5/4/2021 13:40

**Sample ID: 21E0205-01**

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	66.6		% Wt	1		SM 2540G	5/5/21	5/7/21 9:14	CAH

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

Project Location: Wayland, MA

Sample Description:

Work Order: 21E0205

Date Received: 5/5/2021

Field Sample #: V-402-FR-CONF-W

Sampled: 5/4/2021 13:45

Sample ID: 21E0205-02

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Lead	310	0.53	mg/Kg dry	1		SW-846 6010D	5/6/21	5/6/21 12:25	AJL



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

Project Location: Wayland, MA

Sample Description:

Work Order: 21E0205

Date Received: 5/5/2021

**Field Sample #: V-402-FR-CONF-W**

Sampled: 5/4/2021 13:45

**Sample ID: 21E0205-02**

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	93.9		% Wt	1		SM 2540G	5/5/21	5/7/21 9:14	CAH

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

Project Location: Wayland, MA

Sample Description:

Work Order: 21E0205

Date Received: 5/5/2021

Field Sample #: V-403-FR-CONF-W

Sampled: 5/4/2021 13:50

Sample ID: 21E0205-03

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Lead	70	0.53	mg/Kg dry	1		SW-846 6010D	5/6/21	5/6/21 12:41	AJL

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

Project Location: Wayland, MA

Sample Description:

Work Order: 21E0205

Date Received: 5/5/2021

Field Sample #: V-403-FR-CONF-W

Sampled: 5/4/2021 13:50

Sample ID: 21E0205-03

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	93.0		% Wt	1		SM 2540G	5/5/21	5/7/21 9:14	CAH

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

Project Location: Wayland, MA

Sample Description:

Work Order: 21E0205

Date Received: 5/5/2021

Field Sample #: V-404-FR-CONF-N

Sampled: 5/4/2021 13:55

Sample ID: 21E0205-04

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Lead	110	0.55	mg/Kg dry	1		SW-846 6010D	5/6/21	5/6/21 12:46	AJL

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

Project Location: Wayland, MA

Sample Description:

Work Order: 21E0205

Date Received: 5/5/2021

Field Sample #: V-404-FR-CONF-N

Sampled: 5/4/2021 13:55

Sample ID: 21E0205-04

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	92.0		% Wt	1		SM 2540G	5/5/21	5/7/21 9:14	CAH

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

Project Location: Wayland, MA

Sample Description:

Work Order: 21E0205

Date Received: 5/5/2021

Field Sample #: V-405-FR-CONF-N

Sampled: 5/4/2021 14:00

Sample ID: 21E0205-05

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Lead	21	0.54	mg/Kg dry	1		SW-846 6010D	5/6/21	5/6/21 12:51	AJL

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

Project Location: Wayland, MA

Sample Description:

Work Order: 21E0205

Date Received: 5/5/2021

Field Sample #: V-405-FR-CONF-N

Sampled: 5/4/2021 14:00

Sample ID: 21E0205-05

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	92.5		% Wt	1		SM 2540G	5/5/21	5/7/21 9:15	CAH

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

Project Location: Wayland, MA

Sample Description:

Work Order: 21E0205

Date Received: 5/5/2021

Field Sample #: V-406-FR-CONF-N

Sampled: 5/4/2021 14:05

Sample ID: 21E0205-06

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Lead	90	0.53	mg/Kg dry	1		SW-846 6010D	5/6/21	5/6/21 12:56	AJL



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

Project Location: Wayland, MA

Sample Description:

Work Order: 21E0205

Date Received: 5/5/2021

Field Sample #: V-406-FR-CONF-N

Sampled: 5/4/2021 14:05

Sample ID: 21E0205-06

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	93.7		% Wt	1		SM 2540G	5/5/21	5/7/21 9:15	CAH

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

Project Location: Wayland, MA

Sample Description:

Work Order: 21E0205

Date Received: 5/5/2021

Field Sample #: V-407-FR-CONF-E

Sampled: 5/4/2021 14:10

Sample ID: 21E0205-07

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Lead	28	0.55	mg/Kg dry	1		SW-846 6010D	5/6/21	5/6/21 13:01	AJL

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

Project Location: Wayland, MA

Sample Description:

Work Order: 21E0205

Date Received: 5/5/2021

Field Sample #: V-407-FR-CONF-E

Sampled: 5/4/2021 14:10

Sample ID: 21E0205-07

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	90.4		% Wt	1		SM 2540G	5/5/21	5/7/21 9:15	CAH

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

Project Location: Wayland, MA

Sample Description:

Work Order: 21E0205

Date Received: 5/5/2021

Field Sample #: V-408-FR-CONF-S

Sampled: 5/4/2021 14:15

Sample ID: 21E0205-08

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Lead	17	0.55	mg/Kg dry	1		SW-846 6010D	5/6/21	5/6/21 13:07	AJL

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

Project Location: Wayland, MA

Sample Description:

Work Order: 21E0205

Date Received: 5/5/2021

Field Sample #: V-408-FR-CONF-S

Sampled: 5/4/2021 14:15

Sample ID: 21E0205-08

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	90.2		% Wt	1		SM 2540G	5/5/21	5/7/21 9:15	CAH

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

Project Location: Wayland, MA

Sample Description:

Work Order: 21E0205

Date Received: 5/5/2021

Field Sample #: V-409-FR-CONF-S

Sampled: 5/4/2021 14:20

Sample ID: 21E0205-09

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Lead	63	0.53	mg/Kg dry	1		SW-846 6010D	5/6/21	5/6/21 13:12	AJL

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

Project Location: Wayland, MA

Sample Description:

Work Order: 21E0205

Date Received: 5/5/2021

Field Sample #: V-409-FR-CONF-S

Sampled: 5/4/2021 14:20

Sample ID: 21E0205-09

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	94.7		% Wt	1		SM 2540G	5/5/21	5/7/21 9:15	CAH

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

Project Location: Wayland, MA

Sample Description:

Work Order: 21E0205

Date Received: 5/5/2021

Field Sample #: V-410-FR-CONF-S

Sampled: 5/4/2021 14:25

Sample ID: 21E0205-10

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Lead	33	0.53	mg/Kg dry	1		SW-846 6010D	5/6/21	5/6/21 13:17	AJL



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

Project Location: Wayland, MA

Sample Description:

Work Order: 21E0205

Date Received: 5/5/2021

Field Sample #: V-410-FR-CONF-S

Sampled: 5/4/2021 14:25

Sample ID: 21E0205-10

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	94.6		% Wt	1		SM 2540G	5/5/21	5/7/21 9:15	CAH

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

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

Lab Number [Field ID]	Batch	Date
21E0205-01 [V-401-FR-CONF-W]	B281479	05/05/21
21E0205-02 [V-402-FR-CONF-W]	B281479	05/05/21
21E0205-03 [V-403-FR-CONF-W]	B281479	05/05/21
21E0205-04 [V-404-FR-CONF-N]	B281479	05/05/21
21E0205-05 [V-405-FR-CONF-N]	B281479	05/05/21
21E0205-06 [V-406-FR-CONF-N]	B281479	05/05/21
21E0205-07 [V-407-FR-CONF-E]	B281479	05/05/21
21E0205-08 [V-408-FR-CONF-S]	B281479	05/05/21
21E0205-09 [V-409-FR-CONF-S]	B281479	05/05/21
21E0205-10 [V-410-FR-CONF-S]	B281479	05/05/21

**Prep Method: SW-846 3051    Analytical Method: SW-846 6010D**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
21E0205-01 [V-401-FR-CONF-W]	B281489	1.51	50.0	05/06/21
21E0205-02 [V-402-FR-CONF-W]	B281489	1.50	50.0	05/06/21
21E0205-03 [V-403-FR-CONF-W]	B281489	1.51	50.0	05/06/21
21E0205-04 [V-404-FR-CONF-N]	B281489	1.49	50.0	05/06/21
21E0205-05 [V-405-FR-CONF-N]	B281489	1.50	50.0	05/06/21
21E0205-06 [V-406-FR-CONF-N]	B281489	1.50	50.0	05/06/21
21E0205-07 [V-407-FR-CONF-E]	B281489	1.51	50.0	05/06/21
21E0205-08 [V-408-FR-CONF-S]	B281489	1.50	50.0	05/06/21
21E0205-09 [V-409-FR-CONF-S]	B281489	1.50	50.0	05/06/21
21E0205-10 [V-410-FR-CONF-S]	B281489	1.50	50.0	05/06/21

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

**QUALITY CONTROL**
**Metals Analyses (Total) - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B281489 - SW-846 3051</b>										
<b>Blank (B281489-BLK1)</b>										
Prepared & Analyzed: 05/06/21										
Lead	ND	0.50	mg/Kg wet							
<b>LCS (B281489-BS1)</b>										
Prepared & Analyzed: 05/06/21										
Lead	147	1.5	mg/Kg wet	140		105	82.9-117.1			
<b>LCS Dup (B281489-BSD1)</b>										
Prepared & Analyzed: 05/06/21										
Lead	141	1.5	mg/Kg wet	140		101	82.9-117.1	4.39	30	
<b>Reference (B281489-SRM1) MRL Check</b>										
Prepared & Analyzed: 05/06/21										
Lead	0.483	0.51	mg/Kg wet	0.512		94.2	80-120			

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

**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 B281479 - % Solids**

**Duplicate (B281479-DUP1)**

**Source: 21E0205-01**

Prepared: 05/05/21 Analyzed: 05/07/21

% Solids	68.3		% Wt		66.6			2.56	10	
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**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.

**CERTIFICATIONS**

**Certified Analyses included in this Report**

Analyte	Certifications
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*SW-846 6010D in Soil*

Lead CT,NH,NY,AIHA,ME,VA,NC

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2021
CT	Connecticut Department of Public Health	PH-0165	12/31/2022
NY	New York State Department of Health	10899 NELAP	04/1/2022
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2022
RI	Rhode Island Department of Health	LAO00112	12/30/2021
NC	North Carolina Div. of Water Quality	652	12/31/2021
NJ	New Jersey DEP	MA007 NELAP	06/30/2021
FL	Florida Department of Health	E871027 NELAP	06/30/2021
VT	Vermont Department of Health Lead Laboratory	LL720741	07/30/2021
ME	State of Maine	MA00100	06/9/2021
VA	Commonwealth of Virginia	460217	12/14/2021
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2021
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2021
NC-DW	North Carolina Department of Health	25703	07/31/2021
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2021
MI	Dept. of Env, Great Lakes, and Energy	9100	09/6/2021

21E0205

NEP://www.contestlabs.com

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Phone: 413-525-2332  
Fax: 413-525-6405  
Email: info@contestlabs.com

39 Spruce Street  
East Longmeadow, MA 01028

CHAIN OF CUSTODY RECORD

7-Day PFAS 10-Day (std) 10-Day Due Date: Field Filtered Lab to Filter  
1-Day 3-Day 3-Day 4-Day Field Filtered Lab to Filter  
Format: PDF X EXCEL X  
Other: Equis  
CLP Like Data Pkg Required: X  
Email To: ksarson@vetplex.com  
Fax To #:

Address: 100 N. Washington St Suite 302 Boston, MA  
Phone: 617-275-5497  
Project Location: Wayland, MA  
Project Number: 67494  
Project Manager: R. Sarson  
Con-Test Quote Name/Number:  
Invoice Recipient: K. Sarson  
Sampled By: J. Golden

Con-Test Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	Matrix Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	ANALYSIS REQUESTED
1	V-401-FR-CONF-W	5/14/11	1340	Composite	S		X				X
2	V-402-FR-CONF-W		1345								X
3	V-403-FR-CONF-W		1350								X
4	V-404-FR-CONF-N		1355								X
5	V-406-FR-CONF-N		1400								X
6	V-406-FR-CONF-N		1405								X
7	V-407-FR-CONF-E		1410								X
8	V-408-FR-CONF-S		1415								X
9	V-409-FR-CONF-S		1420								X
10	V-410-FR-CONF-S		1425								X

Total Lead  
MA MCP Required  
MCP Accreditation Firm Required  
CLP MCP Required  
MCP Accreditation Firm Required  
MCP Accreditation Firm Required  
MCP Accreditation Firm Required

Client Comments:

Relinquished by: (signature) 5/5/21 12:50  
Received by: (signature) 5-5-21 16:00  
Relinquished by: (signature) 5-5-21 16:00  
Received by: (signature) 5-5-21 6:00  
Relinquished by: (signature) 5/5/21 18:00  
Received by: (signature)

- 1 Matrix Codes:  
GW = Ground Water  
WW = Waste Water  
DW = Drinking Water  
A = Air  
S = Soil  
SL = Sludge  
SOL = Solid  
O = Other (please define)
- 2 Preservation Codes:  
H = HCL  
M = Methanol  
N = Nitric Acid  
S = Sulfuric Acid  
B = Sodium Bisulfate  
T = Sodium Thiocyanate  
O = Other (please define)

Project Entry  
Government Federal City  
Municipality 21 J Brownfield  
MWRA School MBTA  
WRMA  
Other Chromatogram AIHA-LAP, LLC  
PCB ONLY Soxhlet Non Soxhlet

Disclaimer: Con-Test Labs is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine who analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Cor Test values your partnership on each project and will try to assist with missing information, but will not be held accountable.

I Have Not Confirmed Sample Container Numbers With Lab Staff Before Relinquishing Over Samples \_\_\_\_\_



**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 Vector  
 Received By [Signature] Date 5/5/12 Time 1700

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 # 3 Actual Temp - 2.0  
 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 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? n/a  
 Are there Short Holds? F Who was notified? \_\_\_\_\_  
 Is there enough Volume? T  
 Is there Headspace where applicable? n/a 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? Acid n/a Base n/a

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-		Flashpoint		Col./Bacteria		2oz Amb/Clear
DI-		Other Glass		Other Plastic		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, a Pace Analytical Laboratory	Project #: 21E0205
Project Location: Wayland, MA	RTN:

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]  
21E0205-01 thru 21E0205-10

Matrices: Soil

**CAM Protocol (check all that below)**

8260 VOC CAM II A ( )	7470/7471 Hg CAM IIIB ( )	MassDEP VPH CAM IV A ( )	8082 PCB CAM V A ( )	9014 Total Cyanide/PAC CAM VI A ( )	6860 Perchlorate CAM VIII B ( )
8270 SVOC CAM II B ( )	7010 Metals CAM III C ( )	MassDEP VPH CAM IV C ( )	8081 Pesticides CAM V B ( )	7196 Hex Cr CAM VI B ( )	MassDEP APH CAM IX A ( )
6010 Metals CAM III A (X)	6020 Metals CAM III D ( )	MassDEP EPH CAM IV B ( )	8151 Herbicides CAM V C ( )	8330 Explosives CAM VIII A ( )	TO-15 VOC CAM IX B ( )

**Affirmative response to Questions A through F is required for "Presumptive Certainty" status**

<b>A</b>	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?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>B</b>	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>C</b>	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>D</b>	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?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>E a</b>	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).	<input type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>E b</b>	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	<input type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>F</b>	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)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>

**A response to questions G, H and I below is required for "Presumptive Certainty" status**

<b>G</b>	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
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**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.**

<b>H</b>	Were all QC performance standards specified in the CAM protocol(s) achieved?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>I</b>	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <sup>1</sup>

<sup>1</sup>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: Lisa Worthington Position: Technical Representative  
Printed Name: Lisa A. Worthington Date: 05/07/21

May 17, 2021

Kristen Sarson  
Vertex Engineering - Boston  
100 North Washington St. Suite 302  
Boston, MA 02114

Project Location: Wayland, MA  
Client Job Number:  
Project Number: 67404  
Laboratory Work Order Number: 21E0503

Enclosed are results of analyses for samples received by the laboratory on May 10, 2021. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jessica L. Hoffman  
Project Manager

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

 Vertex Engineering - Boston  
 100 North Washington St. Suite 302  
 Boston, MA 02114  
 ATTN: Kristen Sarson

REPORT DATE: 5/17/2021

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 67404

**ANALYTICAL SUMMARY**

WORK ORDER NUMBER: 21E0503

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

PROJECT LOCATION: Wayland, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
V-501-FR-N	21E0503-01	Soil		SM 2540G SW-846 6010D	
V-505-FR-W	21E0503-02	Soil		SM 2540G SW-846 6010D	
V-503-FR-S	21E0503-04	Soil		SM 2540G SW-846 6010D	
V-502-FR-W	21E0503-05	Soil		SM 2540G SW-846 6010D	

**CASE NARRATIVE SUMMARY**

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

The results of analyses reported only relate to samples submitted to Con-Test, a Pace 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  
Technical Representative

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

Project Location: Wayland, MA

Sample Description:

Work Order: 21E0503

Date Received: 5/10/2021

Field Sample #: V-501-FR-N

Sampled: 5/10/2021 09:15

Sample ID: 21E0503-01

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Lead	220	0.51	mg/Kg dry	1		SW-846 6010D	5/12/21	5/14/21 15:09	MJH

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

Project Location: Wayland, MA

Sample Description:

Work Order: 21E0503

Date Received: 5/10/2021

Field Sample #: V-501-FR-N

Sampled: 5/10/2021 09:15

Sample ID: 21E0503-01

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	94.2		% Wt	1		SM 2540G	5/11/21	5/12/21 8:22	JS

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

Project Location: Wayland, MA

Sample Description:

Work Order: 21E0503

Date Received: 5/10/2021

Field Sample #: V-505-FR-W

Sampled: 5/10/2021 09:22

Sample ID: 21E0503-02

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Lead	56	0.53	mg/Kg dry	1		SW-846 6010D	5/14/21	5/15/21 18:09	AJL



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

Project Location: Wayland, MA

Sample Description:

Work Order: 21E0503

Date Received: 5/10/2021

Field Sample #: V-505-FR-W

Sampled: 5/10/2021 09:22

Sample ID: 21E0503-02

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	92.0		% Wt	1		SM 2540G	5/15/21	5/15/21 15:08	SMC

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

Project Location: Wayland, MA

Sample Description:

Work Order: 21E0503

Date Received: 5/10/2021

**Field Sample #: V-503-FR-S**

Sampled: 5/10/2021 09:55

**Sample ID: 21E0503-04**

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Lead	280	0.60	mg/Kg dry	1		SW-846 6010D	5/12/21	5/14/21 15:14	MJH

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

Project Location: Wayland, MA

Sample Description:

Work Order: 21E0503

Date Received: 5/10/2021

**Field Sample #: V-503-FR-S**

Sampled: 5/10/2021 09:55

**Sample ID: 21E0503-04**

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	81.7		% Wt	1		SM 2540G	5/11/21	5/12/21 8:22	JS

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

Project Location: Wayland, MA

Sample Description:

Work Order: 21E0503

Date Received: 5/10/2021

Field Sample #: V-502-FR-W

Sampled: 5/10/2021 09:43

Sample ID: 21E0503-05

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Lead	99	0.53	mg/Kg dry	1		SW-846 6010D	5/12/21	5/14/21 15:19	MJH

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

Project Location: Wayland, MA

Sample Description:

Work Order: 21E0503

Date Received: 5/10/2021

Field Sample #: V-502-FR-W

Sampled: 5/10/2021 09:43

Sample ID: 21E0503-05

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	91.9		% Wt	1		SM 2540G	5/11/21	5/12/21 8:22	JS

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

Lab Number [Field ID]	Batch	Date
21E0503-01 [V-501-FR-N]	B281815	05/11/21
21E0503-04 [V-503-FR-S]	B281815	05/11/21
21E0503-05 [V-502-FR-W]	B281815	05/11/21

**Prep Method: % Solids    Analytical Method: SM 2540G**

Lab Number [Field ID]	Batch	Date
21E0503-02 [V-505-FR-W]	B282102	05/15/21

**Prep Method: SW-846 3050B    Analytical Method: SW-846 6010D**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
21E0503-01 [V-501-FR-N]	B281920	1.56	50.0	05/12/21
21E0503-04 [V-503-FR-S]	B281920	1.54	50.0	05/12/21
21E0503-05 [V-502-FR-W]	B281920	1.55	50.0	05/12/21

**Prep Method: SW-846 3050B    Analytical Method: SW-846 6010D**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
21E0503-02 [V-505-FR-W]	B282058	1.55	50.0	05/14/21

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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
<b>Batch B281920 - SW-846 3050B</b>										
<b>Blank (B281920-BLK1)</b>					Prepared: 05/12/21 Analyzed: 05/14/21					
Lead	ND	0.49	mg/Kg wet							
<b>LCS (B281920-BS1)</b>					Prepared: 05/12/21 Analyzed: 05/14/21					
Lead	119	1.5	mg/Kg wet	140		85.3	82.9-117.1			
<b>LCS Dup (B281920-BSD1)</b>					Prepared: 05/12/21 Analyzed: 05/14/21					
Lead	124	1.5	mg/Kg wet	140		88.7	82.9-117.1	4.00	30	
<b>Reference (B281920-SRM1) MRL Check</b>					Prepared: 05/12/21 Analyzed: 05/14/21					
Lead	0.428	0.48	mg/Kg wet	0.479		89.4	80-120			
<b>Batch B282058 - SW-846 3050B</b>										
<b>Blank (B282058-BLK1)</b>					Prepared: 05/14/21 Analyzed: 05/15/21					
Lead	ND	0.50	mg/Kg wet							
<b>LCS (B282058-BS1)</b>					Prepared: 05/14/21 Analyzed: 05/15/21					
Lead	123	1.4	mg/Kg wet	140		88.2	82.9-117.1			
<b>LCS Dup (B282058-BSD1)</b>					Prepared: 05/14/21 Analyzed: 05/15/21					
Lead	126	1.5	mg/Kg wet	140		90.3	82.9-117.1	2.42	30	
<b>Reference (B282058-SRM1) MRL Check</b>					Prepared: 05/14/21 Analyzed: 05/15/21					
Lead	0.466	0.48	mg/Kg wet	0.483		96.5	80-120			

**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.



**CERTIFICATIONS**

**Certified Analyses included in this Report**

**Analyte** **Certifications**

*SW-846 6010D in Soil*

Lead CT,NH,NY,AIHA,ME,VA,NC

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2021
CT	Connecticut Department of Public Health	PH-0165	12/31/2022
NY	New York State Department of Health	10899 NELAP	04/1/2022
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2022
RI	Rhode Island Department of Health	LAO00112	12/30/2021
NC	North Carolina Div. of Water Quality	652	12/31/2021
NJ	New Jersey DEP	MA007 NELAP	06/30/2021
FL	Florida Department of Health	E871027 NELAP	06/30/2021
VT	Vermont Department of Health Lead Laboratory	LL720741	07/30/2021
ME	State of Maine	MA00100	06/9/2021
VA	Commonwealth of Virginia	460217	12/14/2021
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2021
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2021
NC-DW	North Carolina Department of Health	25703	07/31/2021
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2021
MI	Dept. of Env, Great Lakes, and Energy	9100	09/6/2021

21E0503



Phone: 413-525-2332  
Fax: 413-525-6405  
Email: info@contestlabs.com

http://www.contestlabs.com

CHAIN OF CUSTODY RECORD

39 Spruce Street  
East Longmeadow, MA 01028

Doc # 381 Rev 2\_06262019

Page 1 of 1

Company Name:  
Address: 100 North Washington St, Suite 302 Boston, MA 02111  
Phone: 617-275-5707  
Project Name:  
Project Location: Wayland, MASS  
Project Number: 67404  
Project Manager: Kristen Sarson  
Con-Test Quote Name/Number:  
Invoice Recipient:  
Sampled By: Evan Harring

**Requested Turnaround Time**  
 7-Day  10-Day   
 PFAS 15-Day (std)  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: K.Sarson@vertexeng.com  
 Fax To #:

**Dissolved Metals Samples**  
 Field Filtered   
 Lab to Filter

**Orthophosphate Samples**  
 Field Filtered   
 Lab to Filter

**PCB ONLY**  
 SOXHLET   
 NON SOXHLET

**ANALYSIS REQUESTED**

Con-Test Work Order #	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	Container	Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE
1	V-501-FR-N	5/10/21 9:15	5/10/21 9:15	Grab	S			✓			
2	V-505-FR-W	5/9/21 9:22	5/9/21 9:22		S			✓			
3	V-504-FR-W	5/9/21 9:34	5/9/21 9:34		S			✓			
4	V-503-FR-S	5/9/21 9:55	5/9/21 9:55		S			✓			
5	V-502-FR-W	5/9/21 9:43	5/9/21 9:43		S			✓			
6	V-506-FR-S	5/10/21 10:04	5/10/21 10:04		S			✓			

Total Lead

**2 Preservation Code**  
 Courier Use Only  
**Total Number Of:**  
 VIALS \_\_\_\_\_  
 GLASS 6  
 PLASTIC \_\_\_\_\_  
 BACTERIA \_\_\_\_\_  
 ENCORE \_\_\_\_\_

Glassware in the fridge? Y/N  
 Glassware in freezer? Y/N  
 Prepackaged Cooler? Y/N

\*Contest is not responsible for missing samples from prepacked coolers

per client hold samples that are not checked. JLH 5/11/2021

client asked to activate sample -02. jlh 5/13/2021

Relinquished by: (signature) *Evan Harring* Date/Time: 5/10/21

Received by: (signature) *[Signature]* Date/Time: 5/10/21 10:55

Relinquished by: (signature) *[Signature]* Date/Time: 5/10/21 16:47

Received by: (signature) *[Signature]* Date/Time: 5/25/21 16:17

Relinquished by: (signature) \_\_\_\_\_ Date/Time: \_\_\_\_\_

Received by: (signature) \_\_\_\_\_ Date/Time: \_\_\_\_\_

Relinquished by: (signature) \_\_\_\_\_ Date/Time: \_\_\_\_\_

Received by: (signature) \_\_\_\_\_ Date/Time: \_\_\_\_\_

Client Comments:

**Detection Limit Requirements**  
 MA  MA MCP Required  
 CT  MCP Certification Form Required  
 Other: \_\_\_\_\_ PWSID # \_\_\_\_\_

**Special Requirements**  
 CT RCP Required  
 RCP Certification Form Required  
 MA State DW Required

**Project Entity**  
 Government  Municipality  MWRA  WRTA   
 Federal  21 J  School   
 City  Brownfield  MBTA

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

**1 Matrix Codes:**  
 GW = Ground Water  
 WW = Waste Water  
 DW = Drinking Water  
 A = Air  
 S = Soil  
 SL = Sludge  
 SOL = Solid  
 O = Other (please define)

**2 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)

Lab Comments:

**Disclaimer:** Con-Test Labs is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Con-Test values your partnership on each project and will try to assist with missing information, but will not be held accountable.

I Have Not Confirmed Sample Container Numbers With Lab Staff Before Relinquishing Over Samples \_\_\_\_\_



**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 Vertex

Received By CA Date 5/10/11 Time 1647

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 # 2 Actual Temp - 5.2  
By Blank # \_\_\_\_\_ Actual Temp - \_\_\_\_\_

Was Custody Seal Intact? NA Were Samples Tampered with? NA  
Was COC Relinquished? F 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 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

Are there Rushes? F

Are there Short Holds? F

Is there enough Volume? T

Is there Headspace where applicable? NA

Proper Media/Containers Used? T

Were trip blanks received? F

Do all samples have the proper pH? NA

Who was notified? \_\_\_\_\_

Who was notified? \_\_\_\_\_

Who was notified? \_\_\_\_\_

MS/MSD? F

Is splitting samples required? F

On COC? F

Acid \_\_\_\_\_ Base \_\_\_\_\_

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-		Flashpoint		Col./Bacteria	2oz Amb/Clear
DI-		Other Glass		Other Plastic	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:

## CERTIFICATE OF ANALYSIS

Steve Winters  
United Retek  
47 South Maple Street  
Bellingham, MA 02019

**RE: Rivers Edge Wayland MA (21-08)**  
**ESS Laboratory Work Order Number: 21E0571**

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.



Laurel Stoddard  
Laboratory Director

**REVIEWED***By ESS Laboratory at 3:19 pm, May 20, 2021***Analytical Summary**

The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.



*CERTIFICATE OF ANALYSIS*

Client Name: United Retek  
Client Project ID: Rivers Edge Wayland MA

ESS Laboratory Work Order: 21E0571

**SAMPLE RECEIPT**

The following samples were received on May 17, 2021 for the analyses specified on the enclosed Chain of Custody Record.

<b>Lab Number</b>	<b>Sample Name</b>	<b>Matrix</b>	<b>Analysis</b>
21E0571-01	No 1 Firing Range	Soil	1311, 1311/6010C



CERTIFICATE OF ANALYSIS

Client Name: United Retek  
Client Project ID: Rivers Edge Wayland MA

ESS Laboratory Work Order: 21E0571

**PROJECT NARRATIVE**

**No unusual observations noted.**

**End of Project Narrative.**

**DATA USABILITY LINKS**

*To ensure you are viewing the most current version of the documents below, please clear your internet cookies for [www.ESSLaboratory.com](http://www.ESSLaboratory.com). Consult your IT Support personnel for information on how to clear your internet cookies.*

[Definitions of Quality Control Parameters](#)

[Semivolatile Organics Internal Standard Information](#)

[Semivolatile Organics Surrogate Information](#)

[Volatile Organics Internal Standard Information](#)

[Volatile Organics Surrogate Information](#)

[EPH and VPH Alkane Lists](#)



*CERTIFICATE OF ANALYSIS*

Client Name: United Retek  
Client Project ID: Rivers Edge Wayland MA

ESS Laboratory Work Order: 21E0571

**CURRENT SW-846 METHODOLOGY VERSIONS**

**Analytical Methods**

- 1010A - Flashpoint
- 6010C - ICP
- 6020A - ICP MS
- 7010 - Graphite Furnace
- 7196A - Hexavalent Chromium
- 7470A - Aqueous Mercury
- 7471B - Solid Mercury
- 8011 - EDB/DBCP/TCP
- 8015C - GRO/DRO
- 8081B - Pesticides
- 8082A - PCB
- 8100M - TPH
- 8151A - Herbicides
- 8260B - VOA
- 8270D - SVOA
- 8270D SIM - SVOA Low Level
- 9014 - Cyanide
- 9038 - Sulfate
- 9040C - Aqueous pH
- 9045D - Solid pH (Corrosivity)
- 9050A - Specific Conductance
- 9056A - Anions (IC)
- 9060A - TOC
- 9095B - Paint Filter
- MADEP 04-1.1 - EPH
- MADEP 18-2.1 - VPH

**Prep Methods**

- 3005A - Aqueous ICP Digestion
- 3020A - Aqueous Graphite Furnace / ICP MS Digestion
- 3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
- 3060A - Solid Hexavalent Chromium Digestion
- 3510C - Separatory Funnel Extraction
- 3520C - Liquid / Liquid Extraction
- 3540C - Manual Soxhlet Extraction
- 3541 - Automated Soxhlet Extraction
- 3546 - Microwave Extraction
- 3580A - Waste Dilution
- 5030B - Aqueous Purge and Trap
- 5030C - Aqueous Purge and Trap
- 5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.



*CERTIFICATE OF ANALYSIS*

Client Name: United Retek  
Client Project ID: Rivers Edge Wayland MA  
Client Sample ID: No 1 Firing Range  
Date Sampled: 05/14/21 00:00  
Percent Solids: N/A

ESS Laboratory Work Order: 21E0571  
ESS Laboratory Sample ID: 21E0571-01  
Sample Matrix: Soil  
Units: mg/L

Extraction Method: 3005A TCLP

**1311 TCLP Metals**

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>TCLP Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>I/V</u>	<u>F/V</u>	<u>Batch</u>
Lead	0.107 (0.050)		1311/6010C		1	KJK	05/19/21 17:11	50	50	DE11844





*CERTIFICATE OF ANALYSIS*

Client Name: United Retek  
Client Project ID: Rivers Edge Wayland MA  
Client Sample ID: No 1 Firing Range  
Date Sampled: 05/14/21 00:00  
Percent Solids: N/A  
Initial Volume: 100  
Final Volume: 2000  
Extraction Method: 1311

ESS Laboratory Work Order: 21E0571  
ESS Laboratory Sample ID: 21E0571-01  
Sample Matrix: Soil  
Units: °C  
Analyst: WRM  
Prepared: 5/17/21 20:40

**TCLP Extraction by 1311**

<u>Analyte</u>	<u>Results (MRL)</u>	<u>MDL</u>	<u>Method</u>	<u>Limit</u>	<u>DF</u>	<u>Analyst</u>	<u>Analyzed</u>	<u>Batch</u>
Temperature (Min C)	20.2 (N/A)		1311		1	WRM	05/18/21 15:23	DE11751
Temperature (Max C)	21.6 (N/A)		1311		1	WRM	05/18/21 15:23	DE11751
Temperature (Range)	Temperature is not within 23 +/-2 °C. (N/A)							



*CERTIFICATE OF ANALYSIS*

Client Name: United Retek  
Client Project ID: Rivers Edge Wayland MA

ESS Laboratory Work Order: 21E0571

**Quality Control Data**

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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1311 TCLP Metals

**Batch DE11844 - 3005A\_TCLP**

**Blank**

Lead	ND	0.050	mg/L							
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**LCS**

Lead	0.487	0.050	mg/L	0.5000		97	80-120			
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**LCS Dup**

Lead	0.494	0.050	mg/L	0.5000		99	80-120	1	20	
------	-------	-------	------	--------	--	----	--------	---	----	--



*CERTIFICATE OF ANALYSIS*

Client Name: United Retek  
Client Project ID: Rivers Edge Wayland MA

ESS Laboratory Work Order: 21E0571

**Notes and Definitions**

- Z18 Temperature is not within 23 +/- 2 °C.
- U Analyte included in the analysis, but not detected
- ND Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference
- MDL Method Detection Limit
- MRL Method Reporting Limit
- LOD Limit of Detection
- LOQ Limit of Quantitation
- DL Detection Limit
- I/V Initial Volume
- F/V Final Volume
- § Subcontracted analysis; see attached report
- 1 Range result excludes concentrations of surrogates and/or internal standards eluting in that range.
- 2 Range result excludes concentrations of target analytes eluting in that range.
- 3 Range result excludes the concentration of the C9-C10 aromatic range.
- Avg Results reported as a mathematical average.
- NR No Recovery
- [CALC] Calculated Analyte
- SUB Subcontracted analysis; see attached report
- RL Reporting Limit
- EDL Estimated Detection Limit
- MF Membrane Filtration
- MPN Most Probably Number
- TNTC Too numerous to Count
- CFU Colony Forming Units



CERTIFICATE OF ANALYSIS

Client Name: United Retek  
Client Project ID: Rivers Edge Wayland MA

ESS Laboratory Work Order: 21E0571

ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

Rhode Island Potable and Non Potable Water: LAI00179

<http://www.health.ri.gov/find/labs/analytical/ESS.pdf>

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750

[http://www.ct.gov/dph/lib/dph/environmental\\_health/environmental\\_laboratories/pdf/OutofStateCommercialLaboratories.pdf](http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf)

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002

<http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml>

Massachusetts Potable and Non Potable Water: M-RI002

<http://public.dep.state.ma.us/Labcert/Labcert.aspx>

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424

<http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm>

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313

<http://www.wadsworth.org/labcert/elap/comm.html>

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006

[http://datamine2.state.nj.us/DEP\\_OPRA/OpraMain/pi\\_main?mode=pi\\_by\\_site&sort\\_order=PI\\_NAMEA&Select+a+Site:=58715](http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715)

United States Department of Agriculture Soil Permit: P330-12-00139

Pennsylvania: 68-01752

<http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx>

## ESS Laboratory Sample and Cooler Receipt Checklist

Client: United Retek - TB  
 Shipped/Delivered Via: ESS Courier

ESS Project ID: 21E0571  
 Date Received: 5/17/2021  
 Project Due Date: 5/19/2021  
 Days for Project: 2 Day

- 1. Air bill manifest present?  No  
Air No.: NA
- 2. Were custody seals present?  No
- 3. Is radiation count <100 CPM?  Yes
- 4. Is a Cooler Present?  Yes  
Temp: 2.5 Iced with: Ice
- 5. Was COC signed and dated by client?  Yes

- 6. Does COC match bottles?  Yes
- 7. Is COC complete and correct?  Yes
- 8. Were samples received intact?  Yes
- 9. Were labs informed about short holds & rushes?  Yes / No / NA
- 10. Were any analyses received outside of hold time?  Yes / No

11. Any Subcontracting needed?  Yes / No  
 ESS Sample IDs: \_\_\_\_\_  
 Analysis: \_\_\_\_\_  
 TAT: \_\_\_\_\_

12. Were VOAs received?  Yes / No  
 a. Air bubbles in aqueous VOAs?  Yes / No  
 b. Does methanol cover soil completely?  Yes / No / NA

13. Are the samples properly preserved?  Yes / No  
 a. If metals preserved upon receipt: Date: \_\_\_\_\_ Time: \_\_\_\_\_ By: \_\_\_\_\_  
 b. Low Level VOA vials frozen: Date: \_\_\_\_\_ Time: \_\_\_\_\_ By: \_\_\_\_\_

Sample Receiving Notes:

14. Was there a need to contact Project Manager?  Yes / No  
 a. Was there a need to contact the client?  Yes / No  
 Who was contacted? \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_ By: \_\_\_\_\_

Sample Number	Container ID	Proper Container	Air Bubbles Present	Sufficient Volume	Container Type	Preservative	Record pH (Cyanide and 608 Pesticides)
1	167687	Yes	N/A	Yes	8 oz jar	NP	

**2nd Review**

Were all containers scanned into storage/lab? Initials: ID

- Are barcode labels on correct containers?  Yes / No
- Are all Flashpoint stickers attached/container ID # circled?  Yes / No / NA
- Are all Hex Chrome stickers attached?  Yes / No / NA
- Are all QC stickers attached?  Yes / No / NA
- Are VOA stickers attached / bubbles noted?  Yes / No / NA

Completed By: [Signature] Date & Time: 5/17/21 1633  
 Reviewed By: [Signature] Date & Time: 5/17/21 1643



May 20, 2021

Kristen Sarson  
Vertex Engineering - Boston  
100 North Washington St. Suite 302  
Boston, MA 02114

Project Location: 484 Boston Post Rd., Wayland, MA  
Client Job Number:  
Project Number: 67404  
Laboratory Work Order Number: 21E0828

Enclosed are results of analyses for samples received by the laboratory on May 14, 2021. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jessica L. Hoffman  
Project Manager

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

 Vertex Engineering - Boston  
 100 North Washington St. Suite 302  
 Boston, MA 02114  
 ATTN: Kristen Sarson

REPORT DATE: 5/20/2021

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 67404

**ANALYTICAL SUMMARY**

WORK ORDER NUMBER: 21E0828

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

PROJECT LOCATION: 484 Boston Post Rd., Wayland, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
V-401-DISP-FR	21E0828-01	Soil		SM 2540G SM21-22 2510B Modified SW-846 1030 SW-846 6010D SW-846 7471B SW-846 8015C SW-846 8082A SW-846 8260C-D SW-846 8270D-E SW-846 9014 SW-846 9030A SW-846 9045C	
V-402-DISP-FR	21E0828-02	Soil		SM 2540G SM21-22 2510B Modified SW-846 1030 SW-846 6010D SW-846 7471B SW-846 8015C SW-846 8082A SW-846 8260C-D SW-846 8270D-E SW-846 9014 SW-846 9030A SW-846 9045C	

**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 a select list of analytes were requested and reported.

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

**SW-846 6010D****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:****Selenium**

B282244-BSD1

**SW-846 8015C****Qualifications:****O-25**

Sample contamination consists of heavy residual hydrocarbons similar to asphalt.

**Analyte & Samples(s) Qualified:****TPH (C9-C36)**

21E0828-01[V-401-DISP-FR]

**Z-01**

Sample Contamination does not match any reference standard in our library.

**Analyte & Samples(s) Qualified:****TPH (C9-C36)**

21E0828-02[V-402-DISP-FR]

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

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

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

21E0828-01[V-401-DISP-FR], 21E0828-02[V-402-DISP-FR]

**SW-846 8260C-D****Qualifications:****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**

S059751-CCV1

**V-20**

Continuing calibration verification (CCV) 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:****Chloromethane**

B282232-BS1, B282232-BSD1, S059751-CCV1

**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**

21E0828-01[V-401-DISP-FR], 21E0828-02[V-402-DISP-FR], B282232-BLK1, B282232-BS1, B282232-BSD1, S059751-CCV1

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

**V-05**

Continuing calibration verification (CCV) did not meet method specifications and was biased on the low side for this compound.

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

**Pentachlorophenol**

B282091-BLK1, B282091-BS1, B282091-BSD1, S059690-CCV1

**V-06**

Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side for this compound.

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

**2,4-Dinitrophenol**

S059800-CCV1

**Di-n-octylphthalate**

S059800-CCV1

**V-20**

Continuing calibration verification (CCV) 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**

21E0828-01[V-401-DISP-FR], 21E0828-02[V-402-DISP-FR]

**Di-n-octylphthalate**

21E0828-01[V-401-DISP-FR], 21E0828-02[V-402-DISP-FR]

**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:**

**4-Chloroaniline**

21E0828-01[V-401-DISP-FR], 21E0828-02[V-402-DISP-FR], B282091-BLK1, B282091-BS1, B282091-BSD1, S059690-CCV1, S059800-CCV1

**Aniline**

21E0828-01[V-401-DISP-FR], 21E0828-02[V-402-DISP-FR], B282091-BLK1, B282091-BS1, B282091-BSD1, S059690-CCV1, S059800-CCV1

The results of analyses reported only relate to samples submitted to Con-Test, a Pace 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  
Technical Representative

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

Project Location: 484 Boston Post Rd., Wayland, M

Sample Description:

Work Order: 21E0828

Date Received: 5/14/2021

Field Sample #: V-401-DISP-FR

Sampled: 5/14/2021 10:45

Sample ID: 21E0828-01

Sample Matrix: Soil

## Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.070	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 7:59	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00070	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 7:59	MFF
Benzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 7:59	MFF
Bromobenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 7:59	MFF
Bromochloromethane	ND	0.0014	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 7:59	MFF
Bromodichloromethane	ND	0.0014	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 7:59	MFF
Bromoform	ND	0.0014	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 7:59	MFF
Bromomethane	ND	0.0070	mg/Kg dry	1	V-34	SW-846 8260C-D	5/18/21	5/18/21 7:59	MFF
2-Butanone (MEK)	ND	0.028	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 7:59	MFF
n-Butylbenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 7:59	MFF
sec-Butylbenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 7:59	MFF
tert-Butylbenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 7:59	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00070	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 7:59	MFF
Carbon Disulfide	ND	0.0042	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 7:59	MFF
Carbon Tetrachloride	ND	0.0014	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 7:59	MFF
Chlorobenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 7:59	MFF
Chlorodibromomethane	ND	0.00070	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 7:59	MFF
Chloroethane	ND	0.0070	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 7:59	MFF
Chloroform	ND	0.0028	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 7:59	MFF
Chloromethane	ND	0.0070	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 7:59	MFF
2-Chlorotoluene	ND	0.0014	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 7:59	MFF
4-Chlorotoluene	ND	0.0014	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 7:59	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0014	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 7:59	MFF
1,2-Dibromoethane (EDB)	ND	0.00070	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 7:59	MFF
Dibromomethane	ND	0.0014	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 7:59	MFF
1,2-Dichlorobenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 7:59	MFF
1,3-Dichlorobenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 7:59	MFF
1,4-Dichlorobenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 7:59	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0070	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 7:59	MFF
1,1-Dichloroethane	ND	0.0014	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 7:59	MFF
1,2-Dichloroethane	ND	0.0014	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 7:59	MFF
1,1-Dichloroethylene	ND	0.0028	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 7:59	MFF
cis-1,2-Dichloroethylene	ND	0.0014	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 7:59	MFF
trans-1,2-Dichloroethylene	ND	0.0014	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 7:59	MFF
1,2-Dichloropropane	ND	0.0014	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 7:59	MFF
1,3-Dichloropropane	ND	0.00070	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 7:59	MFF
2,2-Dichloropropane	ND	0.0014	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 7:59	MFF
1,1-Dichloropropene	ND	0.0014	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 7:59	MFF
cis-1,3-Dichloropropene	ND	0.00070	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 7:59	MFF
trans-1,3-Dichloropropene	ND	0.00070	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 7:59	MFF
Diethyl Ether	ND	0.0070	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 7:59	MFF
Diisopropyl Ether (DIPE)	ND	0.00070	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 7:59	MFF
1,4-Dioxane	ND	0.070	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 7:59	MFF
Ethylbenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 7:59	MFF

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

Project Location: 484 Boston Post Rd., Wayland, M

Sample Description:

Work Order: 21E0828

Date Received: 5/14/2021

Field Sample #: V-401-DISP-FR

Sampled: 5/14/2021 10:45

Sample ID: 21E0828-01

Sample Matrix: Soil

## Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0014	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 7:59	MFF
2-Hexanone (MBK)	ND	0.014	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 7:59	MFF
Isopropylbenzene (Cumene)	ND	0.0014	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 7:59	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0014	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 7:59	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0028	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 7:59	MFF
Methylene Chloride	ND	0.0070	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 7:59	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.014	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 7:59	MFF
Naphthalene	ND	0.0028	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 7:59	MFF
n-Propylbenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 7:59	MFF
Styrene	ND	0.0014	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 7:59	MFF
1,1,1,2-Tetrachloroethane	ND	0.0014	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 7:59	MFF
1,1,2,2-Tetrachloroethane	ND	0.00070	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 7:59	MFF
Tetrachloroethylene	ND	0.0014	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 7:59	MFF
Tetrahydrofuran	ND	0.0070	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 7:59	MFF
Toluene	ND	0.0014	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 7:59	MFF
1,2,3-Trichlorobenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 7:59	MFF
1,2,4-Trichlorobenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 7:59	MFF
1,1,1-Trichloroethane	ND	0.0014	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 7:59	MFF
1,1,2-Trichloroethane	ND	0.0014	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 7:59	MFF
Trichloroethylene	ND	0.0014	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 7:59	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0070	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 7:59	MFF
1,2,3-Trichloropropane	ND	0.0014	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 7:59	MFF
1,2,4-Trimethylbenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 7:59	MFF
1,3,5-Trimethylbenzene	ND	0.0014	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 7:59	MFF
Vinyl Chloride	ND	0.0070	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 7:59	MFF
m+p Xylene	ND	0.0028	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 7:59	MFF
o-Xylene	ND	0.0014	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 7:59	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	103	70-130	5/18/21 7:59
Toluene-d8	96.2	70-130	5/18/21 7:59
4-Bromofluorobenzene	94.8	70-130	5/18/21 7:59

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Project Location: 484 Boston Post Rd., Wayland, M

Sample Description:

Work Order: 21E0828

Date Received: 5/14/2021

Field Sample #: V-401-DISP-FR

Sampled: 5/14/2021 10:45

Sample ID: 21E0828-01

Sample Matrix: Soil

## Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 17:02	IMR
Acenaphthylene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 17:02	IMR
Acetophenone	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 17:02	IMR
Aniline	ND	0.35	mg/Kg dry	1	V-34	SW-846 8270D-E	5/14/21	5/19/21 17:02	IMR
Anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 17:02	IMR
Benzo(a)anthracene	0.26	0.18	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 17:02	IMR
Benzo(a)pyrene	0.29	0.18	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 17:02	IMR
Benzo(b)fluoranthene	0.30	0.18	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 17:02	IMR
Benzo(g,h,i)perylene	0.21	0.18	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 17:02	IMR
Benzo(k)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 17:02	IMR
Bis(2-chloroethoxy)methane	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 17:02	IMR
Bis(2-chloroethyl)ether	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 17:02	IMR
Bis(2-chloroisopropyl)ether	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 17:02	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 17:02	IMR
4-Bromophenylphenylether	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 17:02	IMR
Butylbenzylphthalate	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 17:02	IMR
4-Chloroaniline	ND	0.69	mg/Kg dry	1	V-34	SW-846 8270D-E	5/14/21	5/19/21 17:02	IMR
2-Chloronaphthalene	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 17:02	IMR
2-Chlorophenol	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 17:02	IMR
Chrysene	0.28	0.18	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 17:02	IMR
Dibenz(a,h)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 17:02	IMR
Dibenzofuran	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 17:02	IMR
Di-n-butylphthalate	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 17:02	IMR
1,2-Dichlorobenzene	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 17:02	IMR
1,3-Dichlorobenzene	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 17:02	IMR
1,4-Dichlorobenzene	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 17:02	IMR
3,3-Dichlorobenzidine	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 17:02	IMR
2,4-Dichlorophenol	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 17:02	IMR
Diethylphthalate	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 17:02	IMR
2,4-Dimethylphenol	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 17:02	IMR
Dimethylphthalate	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 17:02	IMR
2,4-Dinitrophenol	ND	0.69	mg/Kg dry	1	V-20	SW-846 8270D-E	5/14/21	5/19/21 17:02	IMR
2,4-Dinitrotoluene	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 17:02	IMR
2,6-Dinitrotoluene	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 17:02	IMR
Di-n-octylphthalate	ND	0.35	mg/Kg dry	1	V-20	SW-846 8270D-E	5/14/21	5/19/21 17:02	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 17:02	IMR
Fluoranthene	0.40	0.18	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 17:02	IMR
Fluorene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 17:02	IMR
Hexachlorobenzene	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 17:02	IMR
Hexachlorobutadiene	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 17:02	IMR
Hexachloroethane	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 17:02	IMR
Indeno(1,2,3-cd)pyrene	0.23	0.18	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 17:02	IMR
Isophorone	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 17:02	IMR
2-Methylnaphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 17:02	IMR



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Project Location: 484 Boston Post Rd., Wayland, M

Sample Description:

Work Order: 21E0828

Date Received: 5/14/2021

Field Sample #: V-401-DISP-FR

Sampled: 5/14/2021 10:45

Sample ID: 21E0828-01

Sample Matrix: Soil

## Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 17:02	IMR
3/4-Methylphenol	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 17:02	IMR
Naphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 17:02	IMR
Nitrobenzene	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 17:02	IMR
2-Nitrophenol	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 17:02	IMR
4-Nitrophenol	ND	0.69	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 17:02	IMR
Pentachlorophenol	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 17:02	IMR
Phenanthrene	0.21	0.18	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 17:02	IMR
Phenol	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 17:02	IMR
Pyrene	0.62	0.18	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 17:02	IMR
Pyridine	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 17:02	IMR
1,2,4-Trichlorobenzene	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 17:02	IMR
2,4,5-Trichlorophenol	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 17:02	IMR
2,4,6-Trichlorophenol	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 17:02	IMR
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2-Fluorophenol		88.1	30-130					5/19/21 17:02	
Phenol-d6		96.1	30-130					5/19/21 17:02	
Nitrobenzene-d5		91.9	30-130					5/19/21 17:02	
2-Fluorobiphenyl		87.3	30-130					5/19/21 17:02	
2,4,6-Tribromophenol		103	30-130					5/19/21 17:02	
p-Terphenyl-d14		121	30-130					5/19/21 17:02	

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Project Location: 484 Boston Post Rd., Wayland, M

Sample Description:

Work Order: 21E0828

Date Received: 5/14/2021

Field Sample #: V-401-DISP-FR

Sampled: 5/14/2021 10:45

Sample ID: 21E0828-01

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	5/18/21	5/20/21 0:14	TG
Aroclor-1221 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	5/18/21	5/20/21 0:14	TG
Aroclor-1232 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	5/18/21	5/20/21 0:14	TG
Aroclor-1242 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	5/18/21	5/20/21 0:14	TG
Aroclor-1248 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	5/18/21	5/20/21 0:14	TG
Aroclor-1254 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	5/18/21	5/20/21 0:14	TG
Aroclor-1260 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	5/18/21	5/20/21 0:14	TG
Aroclor-1262 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	5/18/21	5/20/21 0:14	TG
Aroclor-1268 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	5/18/21	5/20/21 0:14	TG
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		63.9	30-150					5/20/21 0:14	
Decachlorobiphenyl [2]		64.2	30-150					5/20/21 0:14	
Tetrachloro-m-xylene [1]		73.6	30-150					5/20/21 0:14	
Tetrachloro-m-xylene [2]		76.8	30-150					5/20/21 0:14	

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Project Location: 484 Boston Post Rd., Wayland, M

Sample Description:

Work Order: 21E0828

Date Received: 5/14/2021

Field Sample #: V-401-DISP-FR

Sampled: 5/14/2021 10:45

Sample ID: 21E0828-01

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	530	87	mg/Kg dry	10	O-25	SW-846 8015C	5/14/21	5/19/21 15:12	RDD
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
2-Fluorobiphenyl	92.5		40-140				5/19/21 15:12		

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Project Location: 484 Boston Post Rd., Wayland, M

Sample Description:

Work Order: 21E0828

Date Received: 5/14/2021

Field Sample #: V-401-DISP-FR

Sampled: 5/14/2021 10:45

Sample ID: 21E0828-01

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	5.0	3.5	mg/Kg dry	1		SW-846 6010D	5/18/21	5/18/21 22:45	AJL
Barium	18	1.7	mg/Kg dry	1		SW-846 6010D	5/18/21	5/18/21 22:45	AJL
Cadmium	ND	0.35	mg/Kg dry	1		SW-846 6010D	5/18/21	5/18/21 22:45	AJL
Chromium	10	0.69	mg/Kg dry	1		SW-846 6010D	5/18/21	5/18/21 22:45	AJL
Lead	2800	0.52	mg/Kg dry	1		SW-846 6010D	5/18/21	5/18/21 22:45	AJL
Mercury	ND	0.026	mg/Kg dry	1		SW-846 7471B	5/17/21	5/19/21 13:27	AJL
Selenium	ND	3.5	mg/Kg dry	1		SW-846 6010D	5/18/21	5/19/21 13:20	AJL
Silver	ND	0.35	mg/Kg dry	1		SW-846 6010D	5/18/21	5/18/21 22:45	AJL

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Project Location: 484 Boston Post Rd., Wayland, M

Sample Description:

Work Order: 21E0828

Date Received: 5/14/2021

Field Sample #: V-401-DISP-FR

Sampled: 5/14/2021 10:45

Sample ID: 21E0828-01

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	95.3		% Wt	1		SM 2540G	5/17/21	5/17/21 23:03	JS
Ignitability	Absent		present/absent	1		SW-846 1030	5/18/21	5/18/21 16:07	YR
pH @19.4°C	6.8		pH Units	1		SW-846 9045C	5/14/21	5/14/21 16:30	ALG
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	5/15/21	5/16/21 15:49	YR
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	5/15/21	5/16/21 15:07	YR
Specific conductance	7.0	2.0	µmhos/cm	1		SM21-22 2510B Modified	5/18/21	5/18/21 9:45	EC

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Project Location: 484 Boston Post Rd., Wayland, M

Sample Description:

Work Order: 21E0828

Date Received: 5/14/2021

Field Sample #: V-402-DISP-FR

Sampled: 5/14/2021 10:00

Sample ID: 21E0828-02

Sample Matrix: Soil

## Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.076	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 8:23	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00076	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 8:23	MFF
Benzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 8:23	MFF
Bromobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 8:23	MFF
Bromochloromethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 8:23	MFF
Bromodichloromethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 8:23	MFF
Bromoform	ND	0.0015	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 8:23	MFF
Bromomethane	ND	0.0076	mg/Kg dry	1	V-34	SW-846 8260C-D	5/18/21	5/18/21 8:23	MFF
2-Butanone (MEK)	ND	0.030	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 8:23	MFF
n-Butylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 8:23	MFF
sec-Butylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 8:23	MFF
tert-Butylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 8:23	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00076	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 8:23	MFF
Carbon Disulfide	ND	0.0046	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 8:23	MFF
Carbon Tetrachloride	ND	0.0015	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 8:23	MFF
Chlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 8:23	MFF
Chlorodibromomethane	ND	0.00076	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 8:23	MFF
Chloroethane	ND	0.0076	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 8:23	MFF
Chloroform	ND	0.0030	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 8:23	MFF
Chloromethane	ND	0.0076	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 8:23	MFF
2-Chlorotoluene	ND	0.0015	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 8:23	MFF
4-Chlorotoluene	ND	0.0015	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 8:23	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0015	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 8:23	MFF
1,2-Dibromoethane (EDB)	ND	0.00076	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 8:23	MFF
Dibromomethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 8:23	MFF
1,2-Dichlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 8:23	MFF
1,3-Dichlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 8:23	MFF
1,4-Dichlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 8:23	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0076	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 8:23	MFF
1,1-Dichloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 8:23	MFF
1,2-Dichloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 8:23	MFF
1,1-Dichloroethylene	ND	0.0030	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 8:23	MFF
cis-1,2-Dichloroethylene	ND	0.0015	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 8:23	MFF
trans-1,2-Dichloroethylene	ND	0.0015	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 8:23	MFF
1,2-Dichloropropane	ND	0.0015	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 8:23	MFF
1,3-Dichloropropane	ND	0.00076	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 8:23	MFF
2,2-Dichloropropane	ND	0.0015	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 8:23	MFF
1,1-Dichloropropene	ND	0.0015	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 8:23	MFF
cis-1,3-Dichloropropene	ND	0.00076	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 8:23	MFF
trans-1,3-Dichloropropene	ND	0.00076	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 8:23	MFF
Diethyl Ether	ND	0.0076	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 8:23	MFF
Diisopropyl Ether (DIPE)	ND	0.00076	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 8:23	MFF
1,4-Dioxane	ND	0.076	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 8:23	MFF
Ethylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 8:23	MFF

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

Project Location: 484 Boston Post Rd., Wayland, M

Sample Description:

Work Order: 21E0828

Date Received: 5/14/2021

Field Sample #: V-402-DISP-FR

Sampled: 5/14/2021 10:00

Sample ID: 21E0828-02

Sample Matrix: Soil

## Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0015	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 8:23	MFF
2-Hexanone (MBK)	ND	0.015	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 8:23	MFF
Isopropylbenzene (Cumene)	ND	0.0015	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 8:23	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0015	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 8:23	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0030	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 8:23	MFF
Methylene Chloride	ND	0.0076	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 8:23	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.015	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 8:23	MFF
Naphthalene	ND	0.0030	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 8:23	MFF
n-Propylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 8:23	MFF
Styrene	ND	0.0015	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 8:23	MFF
1,1,1,2-Tetrachloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 8:23	MFF
1,1,2,2-Tetrachloroethane	ND	0.00076	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 8:23	MFF
Tetrachloroethylene	ND	0.0015	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 8:23	MFF
Tetrahydrofuran	ND	0.0076	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 8:23	MFF
Toluene	ND	0.0015	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 8:23	MFF
1,2,3-Trichlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 8:23	MFF
1,2,4-Trichlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 8:23	MFF
1,1,1-Trichloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 8:23	MFF
1,1,2-Trichloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 8:23	MFF
Trichloroethylene	ND	0.0015	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 8:23	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0076	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 8:23	MFF
1,2,3-Trichloropropane	ND	0.0015	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 8:23	MFF
1,2,4-Trimethylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 8:23	MFF
1,3,5-Trimethylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 8:23	MFF
Vinyl Chloride	ND	0.0076	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 8:23	MFF
m+p Xylene	ND	0.0030	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 8:23	MFF
o-Xylene	ND	0.0015	mg/Kg dry	1		SW-846 8260C-D	5/18/21	5/18/21 8:23	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	102	70-130	
Toluene-d8	99.0	70-130	
4-Bromofluorobenzene	95.2	70-130	

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

Project Location: 484 Boston Post Rd., Wayland, M

Sample Description:

Work Order: 21E0828

Date Received: 5/14/2021

Field Sample #: V-402-DISP-FR

Sampled: 5/14/2021 10:00

Sample ID: 21E0828-02

Sample Matrix: Soil

## Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 14:57	IMR
Acenaphthylene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 14:57	IMR
Acetophenone	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 14:57	IMR
Aniline	ND	0.35	mg/Kg dry	1	V-34	SW-846 8270D-E	5/14/21	5/19/21 14:57	IMR
Anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 14:57	IMR
Benzo(a)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 14:57	IMR
Benzo(a)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 14:57	IMR
Benzo(b)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 14:57	IMR
Benzo(g,h,i)perylene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 14:57	IMR
Benzo(k)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 14:57	IMR
Bis(2-chloroethoxy)methane	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 14:57	IMR
Bis(2-chloroethyl)ether	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 14:57	IMR
Bis(2-chloroisopropyl)ether	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 14:57	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 14:57	IMR
4-Bromophenylphenylether	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 14:57	IMR
Butylbenzylphthalate	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 14:57	IMR
4-Chloroaniline	ND	0.69	mg/Kg dry	1	V-34	SW-846 8270D-E	5/14/21	5/19/21 14:57	IMR
2-Chloronaphthalene	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 14:57	IMR
2-Chlorophenol	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 14:57	IMR
Chrysene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 14:57	IMR
Dibenz(a,h)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 14:57	IMR
Dibenzofuran	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 14:57	IMR
Di-n-butylphthalate	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 14:57	IMR
1,2-Dichlorobenzene	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 14:57	IMR
1,3-Dichlorobenzene	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 14:57	IMR
1,4-Dichlorobenzene	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 14:57	IMR
3,3-Dichlorobenzidine	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 14:57	IMR
2,4-Dichlorophenol	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 14:57	IMR
Diethylphthalate	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 14:57	IMR
2,4-Dimethylphenol	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 14:57	IMR
Dimethylphthalate	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 14:57	IMR
2,4-Dinitrophenol	ND	0.69	mg/Kg dry	1	V-20	SW-846 8270D-E	5/14/21	5/19/21 14:57	IMR
2,4-Dinitrotoluene	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 14:57	IMR
2,6-Dinitrotoluene	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 14:57	IMR
Di-n-octylphthalate	ND	0.35	mg/Kg dry	1	V-20	SW-846 8270D-E	5/14/21	5/19/21 14:57	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 14:57	IMR
Fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 14:57	IMR
Fluorene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 14:57	IMR
Hexachlorobenzene	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 14:57	IMR
Hexachlorobutadiene	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 14:57	IMR
Hexachloroethane	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 14:57	IMR
Indeno(1,2,3-cd)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 14:57	IMR
Isophorone	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 14:57	IMR
2-Methylnaphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 14:57	IMR



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

Project Location: 484 Boston Post Rd., Wayland, M

Sample Description:

Work Order: 21E0828

Date Received: 5/14/2021

Field Sample #: V-402-DISP-FR

Sampled: 5/14/2021 10:00

Sample ID: 21E0828-02

Sample Matrix: Soil

## Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 14:57	IMR
3/4-Methylphenol	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 14:57	IMR
Naphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 14:57	IMR
Nitrobenzene	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 14:57	IMR
2-Nitrophenol	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 14:57	IMR
4-Nitrophenol	ND	0.69	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 14:57	IMR
Pentachlorophenol	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 14:57	IMR
Phenanthrene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 14:57	IMR
Phenol	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 14:57	IMR
Pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 14:57	IMR
Pyridine	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 14:57	IMR
1,2,4-Trichlorobenzene	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 14:57	IMR
2,4,5-Trichlorophenol	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 14:57	IMR
2,4,6-Trichlorophenol	ND	0.35	mg/Kg dry	1		SW-846 8270D-E	5/14/21	5/19/21 14:57	IMR
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2-Fluorophenol		96.1	30-130					5/19/21 14:57	
Phenol-d6		104	30-130					5/19/21 14:57	
Nitrobenzene-d5		102	30-130					5/19/21 14:57	
2-Fluorobiphenyl		98.9	30-130					5/19/21 14:57	
2,4,6-Tribromophenol		121	30-130					5/19/21 14:57	
p-Terphenyl-d14		111	30-130					5/19/21 14:57	

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

Project Location: 484 Boston Post Rd., Wayland, M

Sample Description:

Work Order: 21E0828

Date Received: 5/14/2021

Field Sample #: V-402-DISP-FR

Sampled: 5/14/2021 10:00

Sample ID: 21E0828-02

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	5/18/21	5/20/21 0:32	TG
Aroclor-1221 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	5/18/21	5/20/21 0:32	TG
Aroclor-1232 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	5/18/21	5/20/21 0:32	TG
Aroclor-1242 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	5/18/21	5/20/21 0:32	TG
Aroclor-1248 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	5/18/21	5/20/21 0:32	TG
Aroclor-1254 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	5/18/21	5/20/21 0:32	TG
Aroclor-1260 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	5/18/21	5/20/21 0:32	TG
Aroclor-1262 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	5/18/21	5/20/21 0:32	TG
Aroclor-1268 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	5/18/21	5/20/21 0:32	TG
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		64.3	30-150					5/20/21 0:32	
Decachlorobiphenyl [2]		63.1	30-150					5/20/21 0:32	
Tetrachloro-m-xylene [1]		70.2	30-150					5/20/21 0:32	
Tetrachloro-m-xylene [2]		73.4	30-150					5/20/21 0:32	

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

Project Location: 484 Boston Post Rd., Wayland, M

Sample Description:

Work Order: 21E0828

Date Received: 5/14/2021

Field Sample #: V-402-DISP-FR

Sampled: 5/14/2021 10:00

Sample ID: 21E0828-02

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	68	8.7	mg/Kg dry	1	Z-01	SW-846 8015C	5/14/21	5/19/21 21:27	RDD
<b>Surrogates</b>		<b>% Recovery</b>	<b>Recovery Limits</b>		<b>Flag/Qual</b>				
2-Fluorobiphenyl		98.6	40-140					5/19/21 21:27	

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

Project Location: 484 Boston Post Rd., Wayland, M

Sample Description:

Work Order: 21E0828

Date Received: 5/14/2021

Field Sample #: V-402-DISP-FR

Sampled: 5/14/2021 10:00

Sample ID: 21E0828-02

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	5.8	3.5	mg/Kg dry	1		SW-846 6010D	5/18/21	5/18/21 22:52	AJL
Barium	22	1.8	mg/Kg dry	1		SW-846 6010D	5/18/21	5/18/21 22:52	AJL
Cadmium	0.40	0.35	mg/Kg dry	1		SW-846 6010D	5/18/21	5/18/21 22:52	AJL
Chromium	9.9	0.70	mg/Kg dry	1		SW-846 6010D	5/18/21	5/18/21 22:52	AJL
Lead	55	0.53	mg/Kg dry	1		SW-846 6010D	5/18/21	5/18/21 22:52	AJL
Mercury	ND	0.026	mg/Kg dry	1		SW-846 7471B	5/17/21	5/19/21 13:33	AJL
Selenium	ND	3.5	mg/Kg dry	1		SW-846 6010D	5/18/21	5/19/21 13:27	AJL
Silver	ND	0.35	mg/Kg dry	1		SW-846 6010D	5/18/21	5/18/21 22:52	AJL

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

Project Location: 484 Boston Post Rd., Wayland, M

Sample Description:

Work Order: 21E0828

Date Received: 5/14/2021

Field Sample #: V-402-DISP-FR

Sampled: 5/14/2021 10:00

Sample ID: 21E0828-02

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	94.5		% Wt	1		SM 2540G	5/17/21	5/17/21 23:03	JS
Ignitability	Absent		present/absent	1		SW-846 1030	5/18/21	5/18/21 16:07	YR
pH @18.9°C	2.2		pH Units	1		SW-846 9045C	5/14/21	5/14/21 16:30	ALG
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	5/15/21	5/16/21 15:49	YR
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	5/15/21	5/16/21 15:07	YR
Specific conductance	220	2.0	µmhos/cm	1		SM21-22 2510B Modified	5/18/21	5/18/21 9:45	EC

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

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

Lab Number [Field ID]	Batch	Date
21E0828-01 [V-401-DISP-FR]	B282186	05/17/21
21E0828-02 [V-402-DISP-FR]	B282186	05/17/21

**SM21-22 2510B Modified**

Lab Number [Field ID]	Batch	Initial [g]	Date
21E0828-01 [V-401-DISP-FR]	B282247	1.00	05/18/21
21E0828-02 [V-402-DISP-FR]	B282247	1.00	05/18/21

**SW-846 1030**

Lab Number [Field ID]	Batch	Initial [g]	Date
21E0828-01 [V-401-DISP-FR]	B282241	50.0	05/18/21
21E0828-02 [V-402-DISP-FR]	B282241	50.0	05/18/21

**Prep Method: SW-846 3050B Analytical Method: SW-846 6010D**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
21E0828-01 [V-401-DISP-FR]	B282244	1.51	50.0	05/18/21
21E0828-02 [V-402-DISP-FR]	B282244	1.51	50.0	05/18/21

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
21E0828-01 [V-401-DISP-FR]	B282192	0.603	50.0	05/17/21
21E0828-02 [V-402-DISP-FR]	B282192	0.604	50.0	05/17/21

**Prep Method: SW-846 3546 Analytical Method: SW-846 8015C**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
21E0828-01 [V-401-DISP-FR]	B282088	30.3	1.00	05/14/21
21E0828-02 [V-402-DISP-FR]	B282088	30.4	1.00	05/14/21

**Prep Method: SW-846 3540C Analytical Method: SW-846 8082A**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
21E0828-01 [V-401-DISP-FR]	B282228	10.3	10.0	05/18/21
21E0828-02 [V-402-DISP-FR]	B282228	10.3	10.0	05/18/21

**Prep Method: SW-846 5035 Analytical Method: SW-846 8260C-D**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
21E0828-01 [V-401-DISP-FR]	B282232	7.51	10.0	05/18/21
21E0828-02 [V-402-DISP-FR]	B282232	6.97	10.0	05/18/21

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**Sample Extraction Data**
**Prep Method: SW-846 3546    Analytical Method: SW-846 8270D-E**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
21E0828-01 [V-401-DISP-FR]	B282091	30.3	1.00	05/14/21
21E0828-02 [V-402-DISP-FR]	B282091	30.4	1.00	05/14/21

**SW-846 9014**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
21E0828-01 [V-401-DISP-FR]	B282103	25.6	250	05/15/21
21E0828-02 [V-402-DISP-FR]	B282103	25.4	250	05/15/21

**SW-846 9030A**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
21E0828-01 [V-401-DISP-FR]	B282105	25.6	250	05/15/21
21E0828-02 [V-402-DISP-FR]	B282105	25.4	250	05/15/21

**SW-846 9045C**

Lab Number [Field ID]	Batch	Initial [g]	Date
21E0828-01 [V-401-DISP-FR]	B282089	20.0	05/14/21
21E0828-02 [V-402-DISP-FR]	B282089	20.0	05/14/21

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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
<b>Batch B282232 - SW-846 5035</b>										
<b>Blank (B282232-BLK1)</b>										
Prepared & Analyzed: 05/18/21										
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							
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							
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							
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
<b>Batch B282232 - SW-846 5035</b>										
<b>Blank (B282232-BLK1)</b>										
Prepared & Analyzed: 05/18/21										
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	0.0503		mg/Kg wet	0.0500		101	70-130			
Surrogate: Toluene-d8	0.0491		mg/Kg wet	0.0500		98.2	70-130			
Surrogate: 4-Bromofluorobenzene	0.0482		mg/Kg wet	0.0500		96.3	70-130			
<b>LCS (B282232-BS1)</b>										
Prepared & Analyzed: 05/18/21										
Acetone	0.237	0.10	mg/Kg wet	0.200		119	40-160			†
tert-Amyl Methyl Ether (TAME)	0.0198	0.0010	mg/Kg wet	0.0200		98.9	70-130			
Benzene	0.0219	0.0020	mg/Kg wet	0.0200		110	70-130			
Bromobenzene	0.0230	0.0020	mg/Kg wet	0.0200		115	70-130			
Bromochloromethane	0.0239	0.0020	mg/Kg wet	0.0200		120	70-130			
Bromodichloromethane	0.0224	0.0020	mg/Kg wet	0.0200		112	70-130			
Bromoform	0.0239	0.0020	mg/Kg wet	0.0200		119	70-130			
Bromomethane	0.0215	0.010	mg/Kg wet	0.0200		107	40-160		V-34	†
2-Butanone (MEK)	0.226	0.040	mg/Kg wet	0.200		113	40-160			†
n-Butylbenzene	0.0213	0.0020	mg/Kg wet	0.0200		107	70-130			
sec-Butylbenzene	0.0211	0.0020	mg/Kg wet	0.0200		106	70-130			
tert-Butylbenzene	0.0219	0.0020	mg/Kg wet	0.0200		109	70-130			
tert-Butyl Ethyl Ether (TBEE)	0.0206	0.0010	mg/Kg wet	0.0200		103	70-130			
Carbon Disulfide	0.237	0.0060	mg/Kg wet	0.200		119	70-130			
Carbon Tetrachloride	0.0226	0.0020	mg/Kg wet	0.0200		113	70-130			
Chlorobenzene	0.0238	0.0020	mg/Kg wet	0.0200		119	70-130			
Chlorodibromomethane	0.0232	0.0010	mg/Kg wet	0.0200		116	70-130			
Chloroethane	0.0241	0.010	mg/Kg wet	0.0200		120	70-130			
Chloroform	0.0222	0.0040	mg/Kg wet	0.0200		111	70-130			
Chloromethane	0.0242	0.010	mg/Kg wet	0.0200		121	40-160		V-20	†
2-Chlorotoluene	0.0226	0.0020	mg/Kg wet	0.0200		113	70-130			
4-Chlorotoluene	0.0231	0.0020	mg/Kg wet	0.0200		115	70-130			
1,2-Dibromo-3-chloropropane (DBCP)	0.0197	0.0020	mg/Kg wet	0.0200		98.4	70-130			
1,2-Dibromoethane (EDB)	0.0221	0.0010	mg/Kg wet	0.0200		111	70-130			
Dibromomethane	0.0238	0.0020	mg/Kg wet	0.0200		119	70-130			
1,2-Dichlorobenzene	0.0220	0.0020	mg/Kg wet	0.0200		110	70-130			
1,3-Dichlorobenzene	0.0223	0.0020	mg/Kg wet	0.0200		112	70-130			
1,4-Dichlorobenzene	0.0223	0.0020	mg/Kg wet	0.0200		112	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
<b>Batch B282232 - SW-846 5035</b>										
<b>LCS (B282232-BS1)</b>										
Prepared & Analyzed: 05/18/21										
Dichlorodifluoromethane (Freon 12)	0.0204	0.010	mg/Kg wet	0.0200		102	40-160			†
1,1-Dichloroethane	0.0244	0.0020	mg/Kg wet	0.0200		122	70-130			
1,2-Dichloroethane	0.0241	0.0020	mg/Kg wet	0.0200		120	70-130			
1,1-Dichloroethylene	0.0253	0.0040	mg/Kg wet	0.0200		126	70-130			
cis-1,2-Dichloroethylene	0.0226	0.0020	mg/Kg wet	0.0200		113	70-130			
trans-1,2-Dichloroethylene	0.0239	0.0020	mg/Kg wet	0.0200		119	70-130			
1,2-Dichloropropane	0.0237	0.0020	mg/Kg wet	0.0200		119	70-130			
1,3-Dichloropropane	0.0234	0.0010	mg/Kg wet	0.0200		117	70-130			
2,2-Dichloropropane	0.0201	0.0020	mg/Kg wet	0.0200		100	70-130			
1,1-Dichloropropene	0.0234	0.0020	mg/Kg wet	0.0200		117	70-130			
cis-1,3-Dichloropropene	0.0220	0.0010	mg/Kg wet	0.0200		110	70-130			
trans-1,3-Dichloropropene	0.0213	0.0010	mg/Kg wet	0.0200		106	70-130			
Diethyl Ether	0.0222	0.010	mg/Kg wet	0.0200		111	70-130			
Diisopropyl Ether (DIPE)	0.0230	0.0010	mg/Kg wet	0.0200		115	70-130			
1,4-Dioxane	0.185	0.10	mg/Kg wet	0.200		92.6	40-160			†
Ethylbenzene	0.0230	0.0020	mg/Kg wet	0.0200		115	70-130			
Hexachlorobutadiene	0.0230	0.0020	mg/Kg wet	0.0200		115	70-130			
2-Hexanone (MBK)	0.205	0.020	mg/Kg wet	0.200		103	40-160			†
Isopropylbenzene (Cumene)	0.0223	0.0020	mg/Kg wet	0.0200		111	70-130			
p-Isopropyltoluene (p-Cymene)	0.0217	0.0020	mg/Kg wet	0.0200		109	70-130			
Methyl tert-Butyl Ether (MTBE)	0.0205	0.0040	mg/Kg wet	0.0200		102	70-130			
Methylene Chloride	0.0248	0.010	mg/Kg wet	0.0200		124	70-130			
4-Methyl-2-pentanone (MIBK)	0.220	0.020	mg/Kg wet	0.200		110	40-160			†
Naphthalene	0.0196	0.0040	mg/Kg wet	0.0200		98.2	70-130			
n-Propylbenzene	0.0228	0.0020	mg/Kg wet	0.0200		114	70-130			
Styrene	0.0231	0.0020	mg/Kg wet	0.0200		116	70-130			
1,1,1,2-Tetrachloroethane	0.0248	0.0020	mg/Kg wet	0.0200		124	70-130			
1,1,2,2-Tetrachloroethane	0.0226	0.0010	mg/Kg wet	0.0200		113	70-130			
Tetrachloroethylene	0.0226	0.0020	mg/Kg wet	0.0200		113	70-130			
Tetrahydrofuran	0.0198	0.010	mg/Kg wet	0.0200		98.8	70-130			
Toluene	0.0227	0.0020	mg/Kg wet	0.0200		114	70-130			
1,2,3-Trichlorobenzene	0.0226	0.0020	mg/Kg wet	0.0200		113	70-130			
1,2,4-Trichlorobenzene	0.0219	0.0020	mg/Kg wet	0.0200		110	70-130			
1,1,1-Trichloroethane	0.0222	0.0020	mg/Kg wet	0.0200		111	70-130			
1,1,2-Trichloroethane	0.0227	0.0020	mg/Kg wet	0.0200		114	70-130			
Trichloroethylene	0.0231	0.0020	mg/Kg wet	0.0200		115	70-130			
Trichlorofluoromethane (Freon 11)	0.0226	0.010	mg/Kg wet	0.0200		113	70-130			
1,2,3-Trichloropropane	0.0229	0.0020	mg/Kg wet	0.0200		115	70-130			
1,2,4-Trimethylbenzene	0.0207	0.0020	mg/Kg wet	0.0200		104	70-130			
1,3,5-Trimethylbenzene	0.0229	0.0020	mg/Kg wet	0.0200		115	70-130			
Vinyl Chloride	0.0240	0.010	mg/Kg wet	0.0200		120	70-130			
m+p Xylene	0.0459	0.0040	mg/Kg wet	0.0400		115	70-130			
o-Xylene	0.0224	0.0020	mg/Kg wet	0.0200		112	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0488		mg/Kg wet	0.0500		97.5	70-130			
Surrogate: Toluene-d8	0.0491		mg/Kg wet	0.0500		98.1	70-130			
Surrogate: 4-Bromofluorobenzene	0.0505		mg/Kg wet	0.0500		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
<b>Batch B282232 - SW-846 5035</b>										
<b>LCS Dup (B282232-BSD1)</b>										
Prepared & Analyzed: 05/18/21										
Acetone	0.247	0.10	mg/Kg wet	0.200		123	40-160	3.97	20	†
tert-Amyl Methyl Ether (TAME)	0.0198	0.0010	mg/Kg wet	0.0200		99.2	70-130	0.353	20	
Benzene	0.0216	0.0020	mg/Kg wet	0.0200		108	70-130	1.62	20	
Bromobenzene	0.0228	0.0020	mg/Kg wet	0.0200		114	70-130	0.831	20	
Bromochloromethane	0.0216	0.0020	mg/Kg wet	0.0200		108	70-130	10.0	20	
Bromodichloromethane	0.0224	0.0020	mg/Kg wet	0.0200		112	70-130	0.179	20	
Bromoform	0.0241	0.0020	mg/Kg wet	0.0200		121	70-130	1.06	20	
Bromomethane	0.0254	0.010	mg/Kg wet	0.0200		127	40-160	16.6	20	V-34 †
2-Butanone (MEK)	0.228	0.040	mg/Kg wet	0.200		114	40-160	1.14	20	†
n-Butylbenzene	0.0205	0.0020	mg/Kg wet	0.0200		102	70-130	3.89	20	
sec-Butylbenzene	0.0200	0.0020	mg/Kg wet	0.0200		100	70-130	5.47	20	
tert-Butylbenzene	0.0203	0.0020	mg/Kg wet	0.0200		102	70-130	7.15	20	
tert-Butyl Ethyl Ether (TBEE)	0.0204	0.0010	mg/Kg wet	0.0200		102	70-130	0.663	20	
Carbon Disulfide	0.232	0.0060	mg/Kg wet	0.200		116	70-130	2.13	20	
Carbon Tetrachloride	0.0215	0.0020	mg/Kg wet	0.0200		107	70-130	4.98	20	
Chlorobenzene	0.0231	0.0020	mg/Kg wet	0.0200		116	70-130	2.85	20	
Chlorodibromomethane	0.0231	0.0010	mg/Kg wet	0.0200		115	70-130	0.337	20	
Chloroethane	0.0249	0.010	mg/Kg wet	0.0200		125	70-130	3.31	20	
Chloroform	0.0217	0.0040	mg/Kg wet	0.0200		108	70-130	2.26	20	
Chloromethane	0.0260	0.010	mg/Kg wet	0.0200		130	40-160	7.38	20	V-20 †
2-Chlorotoluene	0.0220	0.0020	mg/Kg wet	0.0200		110	70-130	2.62	20	
4-Chlorotoluene	0.0225	0.0020	mg/Kg wet	0.0200		112	70-130	2.62	20	
1,2-Dibromo-3-chloropropane (DBCP)	0.0211	0.0020	mg/Kg wet	0.0200		105	70-130	6.95	20	
1,2-Dibromoethane (EDB)	0.0216	0.0010	mg/Kg wet	0.0200		108	70-130	2.61	20	
Dibromomethane	0.0225	0.0020	mg/Kg wet	0.0200		113	70-130	5.32	20	
1,2-Dichlorobenzene	0.0217	0.0020	mg/Kg wet	0.0200		109	70-130	1.37	20	
1,3-Dichlorobenzene	0.0218	0.0020	mg/Kg wet	0.0200		109	70-130	2.16	20	
1,4-Dichlorobenzene	0.0216	0.0020	mg/Kg wet	0.0200		108	70-130	3.17	20	
Dichlorodifluoromethane (Freon 12)	0.0202	0.010	mg/Kg wet	0.0200		101	40-160	0.908	20	†
1,1-Dichloroethane	0.0237	0.0020	mg/Kg wet	0.0200		119	70-130	2.95	20	
1,2-Dichloroethane	0.0243	0.0020	mg/Kg wet	0.0200		121	70-130	0.827	20	
1,1-Dichloroethylene	0.0244	0.0040	mg/Kg wet	0.0200		122	70-130	3.61	20	
cis-1,2-Dichloroethylene	0.0225	0.0020	mg/Kg wet	0.0200		112	70-130	0.462	20	
trans-1,2-Dichloroethylene	0.0231	0.0020	mg/Kg wet	0.0200		116	70-130	3.33	20	
1,2-Dichloropropane	0.0234	0.0020	mg/Kg wet	0.0200		117	70-130	1.50	20	
1,3-Dichloropropane	0.0236	0.0010	mg/Kg wet	0.0200		118	70-130	0.773	20	
2,2-Dichloropropane	0.0193	0.0020	mg/Kg wet	0.0200		96.7	70-130	3.70	20	
1,1-Dichloropropene	0.0224	0.0020	mg/Kg wet	0.0200		112	70-130	4.41	20	
cis-1,3-Dichloropropene	0.0212	0.0010	mg/Kg wet	0.0200		106	70-130	3.63	20	
trans-1,3-Dichloropropene	0.0201	0.0010	mg/Kg wet	0.0200		100	70-130	5.77	20	
Diethyl Ether	0.0223	0.010	mg/Kg wet	0.0200		111	70-130	0.198	20	
Diisopropyl Ether (DIPE)	0.0230	0.0010	mg/Kg wet	0.0200		115	70-130	0.330	20	
1,4-Dioxane	0.206	0.10	mg/Kg wet	0.200		103	40-160	10.5	20	†
Ethylbenzene	0.0219	0.0020	mg/Kg wet	0.0200		109	70-130	5.26	20	
Hexachlorobutadiene	0.0212	0.0020	mg/Kg wet	0.0200		106	70-130	8.11	20	
2-Hexanone (MBK)	0.215	0.020	mg/Kg wet	0.200		107	40-160	4.61	20	†
Isopropylbenzene (Cumene)	0.0214	0.0020	mg/Kg wet	0.0200		107	70-130	4.08	20	
p-Isopropyltoluene (p-Cymene)	0.0206	0.0020	mg/Kg wet	0.0200		103	70-130	5.32	20	
Methyl tert-Butyl Ether (MTBE)	0.0208	0.0040	mg/Kg wet	0.0200		104	70-130	1.62	20	
Methylene Chloride	0.0254	0.010	mg/Kg wet	0.0200		127	70-130	2.38	20	
4-Methyl-2-pentanone (MIBK)	0.227	0.020	mg/Kg wet	0.200		114	40-160	3.05	20	†
Naphthalene	0.0198	0.0040	mg/Kg wet	0.0200		98.9	70-130	0.710	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
<b>Batch B282232 - SW-846 5035</b>										
<b>LCS Dup (B282232-BSD1)</b>										
Prepared & Analyzed: 05/18/21										
n-Propylbenzene	0.0220	0.0020	mg/Kg wet	0.0200		110	70-130	3.54	20	
Styrene	0.0224	0.0020	mg/Kg wet	0.0200		112	70-130	3.33	20	
1,1,1,2-Tetrachloroethane	0.0238	0.0020	mg/Kg wet	0.0200		119	70-130	3.92	20	
1,1,2,2-Tetrachloroethane	0.0227	0.0010	mg/Kg wet	0.0200		114	70-130	0.450	20	
Tetrachloroethylene	0.0223	0.0020	mg/Kg wet	0.0200		112	70-130	1.41	20	
Tetrahydrofuran	0.0213	0.010	mg/Kg wet	0.0200		106	70-130	7.41	20	
Toluene	0.0223	0.0020	mg/Kg wet	0.0200		112	70-130	1.83	20	
1,2,3-Trichlorobenzene	0.0221	0.0020	mg/Kg wet	0.0200		110	70-130	2.39	20	
1,2,4-Trichlorobenzene	0.0215	0.0020	mg/Kg wet	0.0200		107	70-130	2.21	20	
1,1,1-Trichloroethane	0.0212	0.0020	mg/Kg wet	0.0200		106	70-130	4.64	20	
1,1,2-Trichloroethane	0.0227	0.0020	mg/Kg wet	0.0200		114	70-130	0.00880	20	
Trichloroethylene	0.0227	0.0020	mg/Kg wet	0.0200		113	70-130	1.66	20	
Trichlorofluoromethane (Freon 11)	0.0220	0.010	mg/Kg wet	0.0200		110	70-130	2.55	20	
1,2,3-Trichloropropane	0.0238	0.0020	mg/Kg wet	0.0200		119	70-130	3.84	20	
1,2,4-Trimethylbenzene	0.0201	0.0020	mg/Kg wet	0.0200		101	70-130	3.01	20	
1,3,5-Trimethylbenzene	0.0221	0.0020	mg/Kg wet	0.0200		111	70-130	3.54	20	
Vinyl Chloride	0.0238	0.010	mg/Kg wet	0.0200		119	70-130	0.636	20	
m+p Xylene	0.0442	0.0040	mg/Kg wet	0.0400		111	70-130	3.67	20	
o-Xylene	0.0216	0.0020	mg/Kg wet	0.0200		108	70-130	3.41	20	
Surrogate: 1,2-Dichloroethane-d4	0.0486		mg/Kg wet	0.0500		97.3	70-130			
Surrogate: Toluene-d8	0.0504		mg/Kg wet	0.0500		101	70-130			
Surrogate: 4-Bromofluorobenzene	0.0500		mg/Kg wet	0.0500		100	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
<b>Batch B282091 - SW-846 3546</b>										
<b>Blank (B282091-BLK1)</b>										
Prepared: 05/14/21 Analyzed: 05/17/21										
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							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							
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							
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							
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							
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							
2,4-Dinitrophenol	ND	0.66	mg/Kg wet							
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							
1,2-Diphenylhydrazine/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							V-05
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
<b>Batch B282091 - SW-846 3546</b>										
<b>Blank (B282091-BLK1)</b>										
Prepared: 05/14/21 Analyzed: 05/17/21										
Phenol	ND	0.34	mg/Kg wet							
Pyrene	ND	0.17	mg/Kg wet							
Pyridine	ND	0.34	mg/Kg wet							
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	5.80		mg/Kg wet	6.62		87.7	30-130			
Surrogate: Phenol-d6	6.50		mg/Kg wet	6.62		98.1	30-130			
Surrogate: Nitrobenzene-d5	2.65		mg/Kg wet	3.31		80.1	30-130			
Surrogate: 2-Fluorobiphenyl	2.71		mg/Kg wet	3.31		81.9	30-130			
Surrogate: 2,4,6-Tribromophenol	2.76		mg/Kg wet	3.31		83.2	30-130			
Surrogate: p-Terphenyl-d14	3.21		mg/Kg wet	3.31		96.9	30-130			
<b>LCS (B282091-BS1)</b>										
Prepared: 05/14/21 Analyzed: 05/17/21										
Acenaphthene	1.19	0.17	mg/Kg wet	1.65		72.3	40-140			
Acenaphthylene	1.24	0.17	mg/Kg wet	1.65		75.4	40-140			
Acetophenone	1.26	0.34	mg/Kg wet	1.65		76.5	40-140			
Aniline	1.04	0.34	mg/Kg wet	1.65		62.9	40-140			V-34
Anthracene	1.39	0.17	mg/Kg wet	1.65		84.3	40-140			
Benzo(a)anthracene	1.35	0.17	mg/Kg wet	1.65		81.9	40-140			
Benzo(a)pyrene	1.26	0.17	mg/Kg wet	1.65		76.6	40-140			
Benzo(b)fluoranthene	1.39	0.17	mg/Kg wet	1.65		84.4	40-140			
Benzo(g,h,i)perylene	1.30	0.17	mg/Kg wet	1.65		78.5	40-140			
Benzo(k)fluoranthene	1.33	0.17	mg/Kg wet	1.65		80.9	40-140			
Bis(2-chloroethoxy)methane	1.18	0.34	mg/Kg wet	1.65		71.4	40-140			
Bis(2-chloroethyl)ether	1.12	0.34	mg/Kg wet	1.65		68.1	40-140			
Bis(2-chloroisopropyl)ether	1.17	0.34	mg/Kg wet	1.65		71.2	40-140			
Bis(2-Ethylhexyl)phthalate	1.47	0.34	mg/Kg wet	1.65		88.9	40-140			
4-Bromophenylphenylether	1.27	0.34	mg/Kg wet	1.65		77.2	40-140			
Butylbenzylphthalate	1.42	0.34	mg/Kg wet	1.65		86.3	40-140			
4-Chloroaniline	0.988	0.65	mg/Kg wet	1.65		59.9	15-140			V-34 †
2-Chloronaphthalene	1.10	0.34	mg/Kg wet	1.65		66.6	40-140			
2-Chlorophenol	1.21	0.34	mg/Kg wet	1.65		73.2	30-130			
Chrysene	1.38	0.17	mg/Kg wet	1.65		83.9	40-140			
Dibenz(a,h)anthracene	1.32	0.17	mg/Kg wet	1.65		80.2	40-140			
Dibenzofuran	1.31	0.34	mg/Kg wet	1.65		79.4	40-140			
Di-n-butylphthalate	1.47	0.34	mg/Kg wet	1.65		88.9	40-140			
1,2-Dichlorobenzene	1.05	0.34	mg/Kg wet	1.65		63.9	40-140			
1,3-Dichlorobenzene	1.02	0.34	mg/Kg wet	1.65		61.7	40-140			
1,4-Dichlorobenzene	1.02	0.34	mg/Kg wet	1.65		62.0	40-140			
3,3-Dichlorobenzidine	1.26	0.17	mg/Kg wet	1.65		76.3	40-140			
2,4-Dichlorophenol	1.25	0.34	mg/Kg wet	1.65		75.7	30-130			
Diethylphthalate	1.32	0.34	mg/Kg wet	1.65		79.9	40-140			
2,4-Dimethylphenol	1.24	0.34	mg/Kg wet	1.65		75.3	30-130			
Dimethylphthalate	1.30	0.34	mg/Kg wet	1.65		78.9	40-140			
2,4-Dinitrophenol	1.23	0.65	mg/Kg wet	1.65		74.6	15-140			†
2,4-Dinitrotoluene	1.51	0.34	mg/Kg wet	1.65		91.5	40-140			
2,6-Dinitrotoluene	1.50	0.34	mg/Kg wet	1.65		91.1	40-140			
Di-n-octylphthalate	1.51	0.34	mg/Kg wet	1.65		91.8	40-140			
1,2-Diphenylhydrazine/Azobenzene	1.36	0.34	mg/Kg wet	1.65		82.6	40-140			
Fluoranthene	1.37	0.17	mg/Kg wet	1.65		83.1	40-140			
Fluorene	1.30	0.17	mg/Kg wet	1.65		79.1	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
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**Batch B282091 - SW-846 3546**
**LCS (B282091-BS1)**

Prepared: 05/14/21 Analyzed: 05/17/21

Hexachlorobenzene	1.30	0.34	mg/Kg wet	1.65		78.8	40-140			
Hexachlorobutadiene	0.988	0.34	mg/Kg wet	1.65		59.9	40-140			
Hexachloroethane	1.00	0.34	mg/Kg wet	1.65		60.9	40-140			
Indeno(1,2,3-cd)pyrene	1.37	0.17	mg/Kg wet	1.65		82.9	40-140			
Isophorone	1.25	0.34	mg/Kg wet	1.65		75.6	40-140			
2-Methylnaphthalene	1.29	0.17	mg/Kg wet	1.65		78.2	40-140			
2-Methylphenol	1.33	0.34	mg/Kg wet	1.65		80.8	30-130			
3/4-Methylphenol	1.41	0.34	mg/Kg wet	1.65		85.5	30-130			
Naphthalene	1.09	0.17	mg/Kg wet	1.65		65.8	40-140			
Nitrobenzene	1.12	0.34	mg/Kg wet	1.65		67.7	40-140			
2-Nitrophenol	1.16	0.34	mg/Kg wet	1.65		70.0	30-130			
4-Nitrophenol	1.52	0.65	mg/Kg wet	1.65		92.4	15-140			†
Pentachlorophenol	0.810	0.34	mg/Kg wet	1.65		49.1	30-130			V-05
Phenanthrene	1.36	0.17	mg/Kg wet	1.65		82.7	40-140			
Phenol	1.32	0.34	mg/Kg wet	1.65		80.2	15-140			†
Pyrene	1.31	0.17	mg/Kg wet	1.65		79.7	40-140			
Pyridine	0.822	0.34	mg/Kg wet	1.65		49.8	30-140			†
1,2,4-Trichlorobenzene	1.02	0.34	mg/Kg wet	1.65		61.7	40-140			
2,4,5-Trichlorophenol	1.30	0.34	mg/Kg wet	1.65		78.5	30-130			
2,4,6-Trichlorophenol	1.27	0.34	mg/Kg wet	1.65		77.0	30-130			
Surrogate: 2-Fluorophenol	5.17		mg/Kg wet	6.60		78.3	30-130			
Surrogate: Phenol-d6	6.17		mg/Kg wet	6.60		93.4	30-130			
Surrogate: Nitrobenzene-d5	2.30		mg/Kg wet	3.30		69.6	30-130			
Surrogate: 2-Fluorobiphenyl	2.51		mg/Kg wet	3.30		76.1	30-130			
Surrogate: 2,4,6-Tribromophenol	2.92		mg/Kg wet	3.30		88.4	30-130			
Surrogate: p-Terphenyl-d14	3.19		mg/Kg wet	3.30		96.8	30-130			

**LCS Dup (B282091-BS1)**

Prepared: 05/14/21 Analyzed: 05/17/21

Acenaphthene	1.22	0.17	mg/Kg wet	1.63		74.4	40-140	1.99	30	
Acenaphthylene	1.27	0.17	mg/Kg wet	1.63		77.9	40-140	2.25	30	
Acetophenone	1.42	0.33	mg/Kg wet	1.63		86.6	40-140	11.4	30	
Aniline	1.15	0.33	mg/Kg wet	1.63		70.7	40-140	10.6	30	V-34
Anthracene	1.37	0.17	mg/Kg wet	1.63		83.6	40-140	1.82	30	
Benzo(a)anthracene	1.34	0.17	mg/Kg wet	1.63		82.2	40-140	0.546	30	
Benzo(a)pyrene	1.30	0.17	mg/Kg wet	1.63		79.4	40-140	2.58	30	
Benzo(b)fluoranthene	1.40	0.17	mg/Kg wet	1.63		85.9	40-140	0.800	30	
Benzo(g,h,i)perylene	1.32	0.17	mg/Kg wet	1.63		80.6	40-140	1.60	30	
Benzo(k)fluoranthene	1.38	0.17	mg/Kg wet	1.63		84.5	40-140	3.35	30	
Bis(2-chloroethoxy)methane	1.25	0.33	mg/Kg wet	1.63		76.5	40-140	5.97	30	
Bis(2-chloroethyl)ether	1.24	0.33	mg/Kg wet	1.63		76.1	40-140	10.1	30	
Bis(2-chloroisopropyl)ether	1.30	0.33	mg/Kg wet	1.63		79.7	40-140	10.3	30	
Bis(2-Ethylhexyl)phthalate	1.48	0.33	mg/Kg wet	1.63		90.8	40-140	1.13	30	
4-Bromophenylphenylether	1.24	0.33	mg/Kg wet	1.63		75.9	40-140	2.68	30	
Butylbenzylphthalate	1.45	0.33	mg/Kg wet	1.63		88.6	40-140	1.55	30	
4-Chloroaniline	1.12	0.65	mg/Kg wet	1.63		68.4	15-140	12.4	30	V-34 †
2-Chloronaphthalene	1.18	0.33	mg/Kg wet	1.63		72.1	40-140	6.95	30	
2-Chlorophenol	1.33	0.33	mg/Kg wet	1.63		81.4	30-130	9.73	30	
Chrysene	1.33	0.17	mg/Kg wet	1.63		81.5	40-140	3.86	30	
Dibenz(a,h)anthracene	1.35	0.17	mg/Kg wet	1.63		82.7	40-140	2.01	30	
Dibenzofuran	1.33	0.33	mg/Kg wet	1.63		81.5	40-140	1.55	30	
Di-n-butylphthalate	1.46	0.33	mg/Kg wet	1.63		89.5	40-140	0.335	30	
1,2-Dichlorobenzene	1.18	0.33	mg/Kg wet	1.63		72.3	40-140	11.3	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
<b>Batch B282091 - SW-846 3546</b>										
<b>LCS Dup (B282091-BSD1)</b>										
					Prepared: 05/14/21 Analyzed: 05/17/21					
1,3-Dichlorobenzene	1.13	0.33	mg/Kg wet	1.63		68.9	40-140	9.95	30	
1,4-Dichlorobenzene	1.13	0.33	mg/Kg wet	1.63		69.2	40-140	9.99	30	
3,3-Dichlorobenzidine	1.31	0.17	mg/Kg wet	1.63		80.1	40-140	3.88	30	
2,4-Dichlorophenol	1.26	0.33	mg/Kg wet	1.63		77.2	30-130	0.925	30	
Diethylphthalate	1.39	0.33	mg/Kg wet	1.63		84.8	40-140	4.99	30	
2,4-Dimethylphenol	1.28	0.33	mg/Kg wet	1.63		78.5	30-130	3.25	30	
Dimethylphthalate	1.36	0.33	mg/Kg wet	1.63		83.0	40-140	4.03	30	
2,4-Dinitrophenol	1.23	0.65	mg/Kg wet	1.63		75.2	15-140	0.211	30	†
2,4-Dinitrotoluene	1.57	0.33	mg/Kg wet	1.63		95.9	40-140	3.73	30	
2,6-Dinitrotoluene	1.51	0.33	mg/Kg wet	1.63		92.3	40-140	0.236	30	
Di-n-octylphthalate	1.59	0.33	mg/Kg wet	1.63		97.3	40-140	4.81	30	
1,2-Diphenylhydrazine/Azobenzene	1.31	0.33	mg/Kg wet	1.63		80.1	40-140	4.01	30	
Fluoranthene	1.36	0.17	mg/Kg wet	1.63		83.2	40-140	0.961	30	
Fluorene	1.33	0.17	mg/Kg wet	1.63		81.4	40-140	1.96	30	
Hexachlorobenzene	1.29	0.33	mg/Kg wet	1.63		78.9	40-140	0.833	30	
Hexachlorobutadiene	1.08	0.33	mg/Kg wet	1.63		66.0	40-140	8.80	30	
Hexachloroethane	1.14	0.33	mg/Kg wet	1.63		70.0	40-140	13.0	30	
Indeno(1,2,3-cd)pyrene	1.33	0.17	mg/Kg wet	1.63		81.4	40-140	2.81	30	
Isophorone	1.31	0.33	mg/Kg wet	1.63		80.4	40-140	5.14	30	
2-Methylnaphthalene	1.37	0.17	mg/Kg wet	1.63		83.9	40-140	6.10	30	
2-Methylphenol	1.44	0.33	mg/Kg wet	1.63		88.4	30-130	7.95	30	
3/4-Methylphenol	1.48	0.33	mg/Kg wet	1.63		90.9	30-130	5.05	30	
Naphthalene	1.18	0.17	mg/Kg wet	1.63		72.4	40-140	8.54	30	
Nitrobenzene	1.19	0.33	mg/Kg wet	1.63		73.0	40-140	6.57	30	
2-Nitrophenol	1.25	0.33	mg/Kg wet	1.63		76.5	30-130	7.89	30	
4-Nitrophenol	1.58	0.65	mg/Kg wet	1.63		96.7	15-140	3.61	30	†
Pentachlorophenol	0.817	0.33	mg/Kg wet	1.63		50.0	30-130	0.913	30	V-05
Phenanthrene	1.34	0.17	mg/Kg wet	1.63		82.1	40-140	1.69	30	
Phenol	1.37	0.33	mg/Kg wet	1.63		83.9	15-140	3.53	30	†
Pyrene	1.33	0.17	mg/Kg wet	1.63		81.2	40-140	0.880	30	
Pyridine	0.869	0.33	mg/Kg wet	1.63		53.2	30-140	5.54	30	†
1,2,4-Trichlorobenzene	1.12	0.33	mg/Kg wet	1.63		68.8	40-140	9.99	30	
2,4,5-Trichlorophenol	1.30	0.33	mg/Kg wet	1.63		79.6	30-130	0.406	30	
2,4,6-Trichlorophenol	1.26	0.33	mg/Kg wet	1.63		77.4	30-130	0.441	30	
Surrogate: 2-Fluorophenol	5.77		mg/Kg wet	6.54		88.3	30-130			
Surrogate: Phenol-d6	6.69		mg/Kg wet	6.54		102	30-130			
Surrogate: Nitrobenzene-d5	2.50		mg/Kg wet	3.27		76.5	30-130			
Surrogate: 2-Fluorobiphenyl	2.54		mg/Kg wet	3.27		77.7	30-130			
Surrogate: 2,4,6-Tribromophenol	3.05		mg/Kg wet	3.27		93.5	30-130			
Surrogate: p-Terphenyl-d14	3.20		mg/Kg wet	3.27		97.9	30-130			



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**QUALITY CONTROL**
**Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B282228 - SW-846 3540C</b>										
<b>Blank (B282228-BLK1)</b>										
Prepared: 05/18/21 Analyzed: 05/19/21										
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	0.182		mg/Kg wet	0.200		91.2	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.185		mg/Kg wet	0.200		92.4	30-150			
Surrogate: Tetrachloro-m-xylene	0.160		mg/Kg wet	0.200		80.2	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.167		mg/Kg wet	0.200		83.3	30-150			
<b>LCS (B282228-BS1)</b>										
Prepared: 05/18/21 Analyzed: 05/19/21										
Aroclor-1016	0.16	0.020	mg/Kg wet	0.200		81.4	40-140			
Aroclor-1016 [2C]	0.16	0.020	mg/Kg wet	0.200		80.8	40-140			
Aroclor-1260	0.16	0.020	mg/Kg wet	0.200		78.3	40-140			
Aroclor-1260 [2C]	0.15	0.020	mg/Kg wet	0.200		74.8	40-140			
Surrogate: Decachlorobiphenyl	0.186		mg/Kg wet	0.200		92.8	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.187		mg/Kg wet	0.200		93.3	30-150			
Surrogate: Tetrachloro-m-xylene	0.166		mg/Kg wet	0.200		83.1	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.170		mg/Kg wet	0.200		84.9	30-150			
<b>LCS Dup (B282228-BS1)</b>										
Prepared: 05/18/21 Analyzed: 05/20/21										
Aroclor-1016	0.18	0.020	mg/Kg wet	0.200		90.5	40-140	10.6	30	
Aroclor-1016 [2C]	0.18	0.020	mg/Kg wet	0.200		89.2	40-140	9.90	30	
Aroclor-1260	0.17	0.020	mg/Kg wet	0.200		84.8	40-140	7.98	30	
Aroclor-1260 [2C]	0.16	0.020	mg/Kg wet	0.200		80.7	40-140	7.64	30	
Surrogate: Decachlorobiphenyl	0.193		mg/Kg wet	0.200		96.3	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.196		mg/Kg wet	0.200		97.8	30-150			
Surrogate: Tetrachloro-m-xylene	0.184		mg/Kg wet	0.200		91.8	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.189		mg/Kg wet	0.200		94.6	30-150			

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**QUALITY CONTROL**
**Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B282228 - SW-846 3540C</b>										
<b>Matrix Spike (B282228-MS1)</b>										
		<b>Source: 21E0828-01</b>			Prepared: 05/18/21 Analyzed: 05/20/21					
Aroclor-1016	0.19	0.082	mg/Kg dry	0.206	ND	90.0	40-140			
Aroclor-1016 [2C]	0.20	0.082	mg/Kg dry	0.206	ND	95.6	40-140			
Aroclor-1260	0.16	0.082	mg/Kg dry	0.206	ND	78.1	40-140			
Aroclor-1260 [2C]	0.16	0.082	mg/Kg dry	0.206	ND	76.4	40-140			
Surrogate: Decachlorobiphenyl	0.161		mg/Kg dry	0.206		78.4	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.163		mg/Kg dry	0.206		79.0	30-150			
Surrogate: Tetrachloro-m-xylene	0.168		mg/Kg dry	0.206		81.5	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.172		mg/Kg dry	0.206		83.5	30-150			
<b>Matrix Spike Dup (B282228-MSD1)</b>										
		<b>Source: 21E0828-01</b>			Prepared: 05/18/21 Analyzed: 05/20/21					
Aroclor-1016	0.17	0.083	mg/Kg dry	0.208	ND	82.6	40-140	7.60	50	
Aroclor-1016 [2C]	0.17	0.083	mg/Kg dry	0.208	ND	82.8	40-140	13.4	50	
Aroclor-1260	0.15	0.083	mg/Kg dry	0.208	ND	71.2	40-140	8.32	50	
Aroclor-1260 [2C]	0.14	0.083	mg/Kg dry	0.208	ND	69.6	40-140	8.37	50	
Surrogate: Decachlorobiphenyl	0.146		mg/Kg dry	0.208		70.2	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.144		mg/Kg dry	0.208		69.1	30-150			
Surrogate: Tetrachloro-m-xylene	0.155		mg/Kg dry	0.208		74.8	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.157		mg/Kg dry	0.208		75.3	30-150			

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**QUALITY CONTROL**
**Petroleum Hydrocarbons Analyses - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B282088 - SW-846 3546</b>									
<b>Blank (B282088-BLK1)</b>					Prepared: 05/14/21 Analyzed: 05/17/21				
TPH (C9-C36)	ND	8.3	mg/Kg wet						
Surrogate: 2-Fluorobiphenyl	2.70		mg/Kg wet	3.31		81.6 40-140			
<b>LCS (B282088-BS1)</b>					Prepared: 05/14/21 Analyzed: 05/17/21				
TPH (C9-C36)	22.2	8.2	mg/Kg wet	33.0		67.3 40-140			
Surrogate: 2-Fluorobiphenyl	2.26		mg/Kg wet	3.30		68.6 40-140			
<b>LCS Dup (B282088-BSD1)</b>					Prepared: 05/14/21 Analyzed: 05/17/21				
TPH (C9-C36)	23.8	8.3	mg/Kg wet	33.3		71.3 40-140	6.78	25	
Surrogate: 2-Fluorobiphenyl	2.59		mg/Kg wet	3.33		77.6 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
<b>Batch B282192 - SW-846 7471</b>										
<b>Blank (B282192-BLK1)</b>					Prepared: 05/17/21 Analyzed: 05/19/21					
Mercury	ND	0.025	mg/Kg wet							
<b>LCS (B282192-BS1)</b>					Prepared: 05/17/21 Analyzed: 05/19/21					
Mercury	14.7	0.75	mg/Kg wet	15.6		94.4	59.3-140.4			
<b>LCS Dup (B282192-BSD1)</b>					Prepared: 05/17/21 Analyzed: 05/19/21					
Mercury	14.4	0.75	mg/Kg wet	15.6		92.1	59.3-140.4	2.43	20	
<b>Batch B282244 - SW-846 3050B</b>										
<b>Blank (B282244-BLK1)</b>					Prepared & Analyzed: 05/18/21					
Arsenic	ND	3.2	mg/Kg wet							
Barium	ND	1.6	mg/Kg wet							
Cadmium	ND	0.32	mg/Kg wet							
Chromium	ND	0.64	mg/Kg wet							
Lead	ND	0.48	mg/Kg wet							
Selenium	ND	3.2	mg/Kg wet							
Silver	ND	0.32	mg/Kg wet							
<b>LCS (B282244-BS1)</b>					Prepared & Analyzed: 05/18/21					
Arsenic	149	9.9	mg/Kg wet	170		87.5	82.9-117.6			
Barium	174	4.9	mg/Kg wet	183		95.2	82.5-117.5			
Cadmium	85.4	0.99	mg/Kg wet	89.5		95.4	82.8-117.3			
Chromium	97.6	2.0	mg/Kg wet	101		96.7	82.1-117.8			
Lead	128	1.5	mg/Kg wet	140		91.5	82.9-117.1			
Selenium	151	9.9	mg/Kg wet	182		83.1	79.7-120.3			
Silver	55.6	0.99	mg/Kg wet	50.1		111	80.2-120			
<b>LCS Dup (B282244-BSD1)</b>					Prepared & Analyzed: 05/18/21					
Arsenic	142	10	mg/Kg wet	170		83.4	82.9-117.6	4.76	30	
Barium	169	5.0	mg/Kg wet	183		92.4	82.5-117.5	2.99	20	
Cadmium	77.2	1.0	mg/Kg wet	89.5		86.3	82.8-117.3	10.1	20	
Chromium	90.3	2.0	mg/Kg wet	101		89.4	82.1-117.8	7.80	30	
Lead	121	1.5	mg/Kg wet	140		86.6	82.9-117.1	5.54	30	
<b>Selenium</b>	144	10	mg/Kg wet	182		<b>78.9</b> *	79.7-120.3	5.14	30	L-07
Silver	47.0	1.0	mg/Kg wet	50.1		93.9	80.2-120	16.7	30	
<b>Reference (B282244-SRM1) MRL Check</b>					Prepared & Analyzed: 05/18/21					
Lead	0.510	0.48	mg/Kg wet	0.479		107	80-120			

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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
<b>Batch B282089 - SW-846 9045C</b>										
<b>LCS (B282089-BS1)</b>										
Prepared & Analyzed: 05/14/21										
pH	5.97		pH Units	6.00		99.6	90-110			
<b>Batch B282103 - SW-846 9014</b>										
<b>Blank (B282103-BLK1)</b>										
Prepared: 05/15/21 Analyzed: 05/16/21										
Reactive Cyanide	ND	0.40	mg/Kg							
<b>LCS (B282103-BS1)</b>										
Prepared: 05/15/21 Analyzed: 05/16/21										
Reactive Cyanide	9.4	0.40	mg/Kg	10.0		94.4	81.3-111			
<b>LCS (B282103-BS2)</b>										
Prepared: 05/15/21 Analyzed: 05/16/21										
Reactive Cyanide	9.4	0.40	mg/Kg	10.0		94.4	81.3-111			
<b>Batch B282105 - SW-846 9030A</b>										
<b>Blank (B282105-BLK1)</b>										
Prepared: 05/15/21 Analyzed: 05/16/21										
Reactive Sulfide	ND	2.0	mg/Kg							
<b>LCS (B282105-BS1)</b>										
Prepared: 05/15/21 Analyzed: 05/16/21										
Reactive Sulfide	5.6	2.0	mg/Kg	5.20		108	71.8-120			
<b>LCS (B282105-BS2)</b>										
Prepared: 05/15/21 Analyzed: 05/16/21										
Reactive Sulfide	5.6	2.0	mg/Kg	5.20		108	71.8-120			
<b>Batch B282247 - SM21-22 2510B Modified</b>										
<b>Blank (B282247-BLK1)</b>										
Prepared & Analyzed: 05/18/21										
Specific conductance	ND	2.0	µmhos/cm							
<b>LCS (B282247-BS1)</b>										
Prepared & Analyzed: 05/18/21										
Specific conductance	150		µmhos/cm	137		106	90-114			

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**IDENTIFICATION SUMMARY  
FOR SINGLE COMPONENT ANALYTES**

LCS
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*SW-846 8082A*

Lab Sample ID:           B282228-BS1                                Date(s) Analyzed:           05/19/2021                     05/19/2021          

Instrument ID (1):           ECD10                                Instrument ID (2):           ECD10          

GC Column (1):                      ID:                      (mm)                      GC Column (2):                      ID:                      (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.16	
	2	0.000	-0.030	0.030	0.16	0.0
Aroclor-1260	1	0.000	-0.030	0.030	0.16	
	2	0.000	-0.030	0.030	0.15	6.5

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## IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

LCS Dup

*SW-846 8082A*

 Lab Sample ID:                   B282228-BSD1                                        Date(s) Analyzed:           05/20/2021                     05/20/2021          

 Instrument ID (1):                   ECD10                                        Instrument ID (2):                   ECD10                  

GC Column (1):                      ID:                      (mm)                      GC Column (2):                      ID:                      (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.18	
	2	0.000	-0.030	0.030	0.18	0.0
Aroclor-1260	1	0.000	-0.030	0.030	0.17	
	2	0.000	-0.030	0.030	0.16	6.1



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**IDENTIFICATION SUMMARY  
FOR SINGLE COMPONENT ANALYTES**

<b>Matrix Spike</b>
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*SW-846 8082A*

Lab Sample ID: B282228-MS1 Date(s) Analyzed: 05/20/2021 05/20/2021  
 Instrument ID (1): ECD10 Instrument ID (2): ECD10  
 GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.19	
	2	0.000	-0.030	0.030	0.20	5.1
Aroclor-1260	1	0.000	-0.030	0.030	0.16	
	2	0.000	-0.030	0.030	0.16	0.0





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**IDENTIFICATION SUMMARY  
FOR SINGLE COMPONENT ANALYTES**

*SW-846 8082A*

**Matrix Spike Dup**

Lab Sample ID:           B282228-MSD1                                Date(s) Analyzed:           05/20/2021                     05/20/2021            
 Instrument ID (1):           ECD10                                                Instrument ID (2):           ECD10            
 GC Column (1):                                      ID:                      (mm)                      GC Column (2):                                      ID:                      (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.17	
	2	0.000	-0.030	0.030	0.17	0.0
Aroclor-1260	1	0.000	-0.030	0.030	0.15	
	2	0.000	-0.030	0.030	0.14	6.9

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**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.
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.
O-25	Sample contamination consists of heavy residual hydrocarbons similar to asphalt.
O-32	A dilution was performed as part of the standard analytical procedure.
V-05	Continuing calibration verification (CCV) did not meet method specifications and was biased on the low side for this compound.
V-06	Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side for this compound.
V-16	Response factor is less than method specified minimum acceptable value. Reduced precision and accuracy may be associated with reported result.
V-20	Continuing calibration verification (CCV) 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	Sample Contamination does not match any reference standard in our library.

**CERTIFICATIONS**
**Certified Analyses included in this Report**

Analyte	Certifications
<b>SW-846 1030 in Soil</b>	
Ignitability	NY,NH,CT,NC,ME,VA
<b>SW-846 6010D in Soil</b>	
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
<b>SW-846 7471B in Soil</b>	
Mercury	CT,NH,NY,NC,ME,VA
<b>SW-846 8082A in Soil</b>	
Aroclor-1016	CT,NH,NY,ME,NC,VA,PA
Aroclor-1016 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1221	CT,NH,NY,ME,NC,VA,PA
Aroclor-1221 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1232	CT,NH,NY,ME,NC,VA,PA
Aroclor-1232 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1242	CT,NH,NY,ME,NC,VA,PA
Aroclor-1242 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1248	CT,NH,NY,ME,NC,VA,PA
Aroclor-1248 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1254	CT,NH,NY,ME,NC,VA,PA
Aroclor-1254 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1260	CT,NH,NY,ME,NC,VA,PA
Aroclor-1260 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1262	NY,NC,VA,PA
Aroclor-1262 [2C]	NY,NC,VA,PA
Aroclor-1268	NY,NC,VA,PA
Aroclor-1268 [2C]	NY,NC,VA,PA
<b>SW-846 8260C-D in Soil</b>	
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

**CERTIFICATIONS**
**Certified Analyses included in this Report**

Analyte	Certifications
<i>SW-846 8260C-D in Soil</i>	
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
1,2-Dibromo-3-chloropropane (DBCP)	NY
1,2-Dibromoethane (EDB)	NY
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
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

**CERTIFICATIONS**
**Certified Analyses included in this Report**

Analyte	Certifications
<b><i>SW-846 8260C-D in Soil</i></b>	
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
<b><i>SW-846 8270D-E in Soil</i></b>	
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
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/Azobenzene	NY,NH
Fluoranthene	CT,NY,NH
Fluorene	NY,NH
Hexachlorobenzene	CT,NY,NH
Hexachlorobutadiene	CT,NY,NH

**CERTIFICATIONS**
**Certified Analyses included in this Report**

Analyte	Certifications
<b><i>SW-846 8270D-E in Soil</i></b>	
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
2,4,5-Trichlorophenol	CT,NY,NH
2,4,6-Trichlorophenol	CT,NY,NH
<b><i>SW-846 8270D-E in Water</i></b>	
Acenaphthene	CT,NY,NH
Acenaphthylene	CT,NY,NH
Acetophenone	NY
Aniline	CT,NY
Anthracene	CT,NY,NH
Benzo(a)anthracene	CT,NY,NH
Benzo(a)pyrene	CT,NY,NH
Benzo(b)fluoranthene	CT,NY,NH
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	CT,NY,NH
1,3-Dichlorobenzene	CT,NY,NH
1,4-Dichlorobenzene	CT,NY,NH
3,3-Dichlorobenzidine	CT,NY,NH
2,4-Dichlorophenol	CT,NY,NH

**CERTIFICATIONS**
**Certified Analyses included in this Report**

Analyte	Certifications
<i>SW-846 8270D-E in Water</i>	
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/Azobenzene	NY
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
2,4,5-Trichlorophenol	CT,NY,NH
2,4,6-Trichlorophenol	CT,NY,NH

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Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2021
CT	Connecticut Department of Public Health	PH-0165	12/31/2022
NY	New York State Department of Health	10899 NELAP	04/1/2022
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2022
RI	Rhode Island Department of Health	LAO00112	12/30/2021
NC	North Carolina Div. of Water Quality	652	12/31/2021
NJ	New Jersey DEP	MA007 NELAP	06/30/2021
FL	Florida Department of Health	E871027 NELAP	06/30/2021
VT	Vermont Department of Health Lead Laboratory	LL720741	07/30/2021
ME	State of Maine	MA00100	06/9/2021
VA	Commonwealth of Virginia	460217	12/14/2021
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2021
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2021
NC-DW	North Carolina Department of Health	25703	07/31/2021
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2021
MI	Dept. of Env, Great Lakes, and Energy	9100	09/6/2021



21E0888

Doc # 381 Rev 2\_06262019  
 39 Spruce Street  
 East Longmeadow, MA 01028  
 http://www.con-testlabs.com

Phone: 413-525-2332  
 Fax: 413-525-6405  
 Email: info@con-testlabs.com

Address: 100 N Washington St, Suite 302  
 Phone: 781-917-5300  
 Project Location: 484 Boston Post Rd, Noyahama, MA  
 Project Number: 67404  
 Project Manager: Kristin Sisson  
 Con-Test Quote Name/Number:  
 Invoice Recipient:  
 Sampled By: Madeline Sisson

7-Day PFS 10-Day (std) 10-Day Field Filtered Lab to Filter  
 1-Day 2-Day 3-Day 4-Day 1-Day Field Filtered Lab to Filter  
 Format: PDF EXCEL X  
 Other: X 80015  
 CLP Like Data Pkg Required:  
 Email To: K.Sarson@vertexeng.com  
 Fax To #:

Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE
#12 Firing Range	5/14/21	9:30	Comp	S						
#13 Firing Range		9:30								
V501-FR-CONF-N		9:20								
V502-FR-CONF-S		9:20								
V-401-DISP-FR		10:45								
V-402-DISP-FR		10:00								

Client Comments:  
 → TCLP lead samples = 48hr TAT / ON-HOLD  
 → Disposal Site (V-402-DISP-FR + V-401-DISP-FR) = 5 day TAT

Relinquished by: (signature) Date/Time: 5/14/21  
 Received by: (signature) Date/Time: 5/14/21  
 Relinquished by: (signature) Date/Time: 5/14/21  
 Received by: (signature) Date/Time: 5/14/21  
 Relinquished by: (signature) Date/Time:  
 Received by: (signature) Date/Time:  
 Relinquished by: (signature) Date/Time:  
 Received by: (signature) Date/Time:

Project Entity: Government Federal City Municipality 21 J Brownfield  
 Other: MWRA School MBTA WRTA  
 PCB ONLY: Soxhlet X Non Soxhlet

ANALYSIS REQUESTED

ANALYSIS REQUESTED	7 Preservation Code	Total Number Of:
Total Pb		VIALS
VOCs 8060		GLASS
VOCs 8070		PLASTIC
PCRA 8 Metals		BACTERIA
PCRA / Soxhult extraction		ENCORE
TRH 8015		Glassware in the fridge? Y/N
PH		Glassware in freezer? Y/N
Reactivity, Conductivity		Prepackaged Cooler? Y/N
TCLP (if ground)		*Contest is not responsible for missing samples from prepacked coolers.

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)

Relinquished by: (signature) Date/Time:  
 Received by: (signature) Date/Time:  
 Relinquished by: (signature) Date/Time:  
 Received by: (signature) Date/Time:  
 Relinquished by: (signature) Date/Time:  
 Received by: (signature) Date/Time:

Comments:  
 Disclaimer: Con-Test Labs is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine who analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Con-Test values your partnership on each project and will try to assist with missing information, but will not t held accountable.

I Have Not Confirmed Sample Container Numbers With Lab Staff Before Relinquishing Over Samples \_\_\_\_\_



**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 Verlex

Received By RLF Date 5/14/21 Time 1242

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 # 3 Actual Temp - 3.10°C  
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? F Who was notified? \_\_\_\_\_

Are there Short Holds? T Who was notified? WCC

Is there enough Volume? T

Is there Headspace where applicable? NA 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? \_\_\_\_\_ Acid NA Base NA

Vials	#	Containers:	#	#	#
Unp-		1 Liter Amb.		1 Liter Plastic	16 oz Amb. <u>2</u>
HCL-		500 mL Amb.		500 mL Plastic	8oz Amb/Clear <u>2</u>
Meoh-		250 mL Amb.		250 mL Plastic	4oz Amb/Clear
Bisulfate-		Flashpoint		Col./Bacteria	2oz Amb/Clear <u>2</u>
DI-		Other Glass		Other Plastic	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-	<u>2</u>	250 mL Amb.		250 mL Plastic	4oz Amb/Clear
Bisulfate-	<u>4</u>	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, a Pace Analytical Laboratory	Project #: 21E0828
Project Location: 484 Boston Post Rd., Wayland, MA	RTN:

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]  
 21E0828-01 thru 21E0828-02

Matrices: Soil

CAM Protocol (check all that below)					
8260 VOC CAM II A (X)	7470/7471 Hg CAM IIIB (X)	MassDEP VPH CAM IV A ( )	8082 PCB CAM V A (X)	9014 Total Cyanide/PAC CAM VI A ( )	6860 Perchlorate CAM VIII B ( )
8270 SVOC CAM II B (X)	7010 Metals CAM III C ( )	MassDEP VPH CAM IV C ( )	8081 Pesticides CAM V B ( )	7196 Hex Cr CAM VI B ( )	MassDEP APH CAM IX A ( )
6010 Metals CAM III A (X)	6020 Metals CAM III D ( )	MassDEP EPH CAM IV B ( )	8151 Herbicides CAM V C ( )	8330 Explosives CAM VIII A ( )	TO-15 VOC CAM IX B ( )

**Affirmative response to Questions A through F is required for "Presumptive Certainty" status**

<b>A</b>	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?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>B</b>	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>C</b>	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>D</b>	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?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>E a</b>	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).	<input type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>E b</b>	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	<input type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>F</b>	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)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>

**A response to questions G, H and I below is required for "Presumptive Certainty" status**

<b>G</b>	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
----------	---	--

**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.**

<b>H</b>	Were all QC performance standards specified in the CAM protocol(s) achieved?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <sup>1</sup>
<b>I</b>	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <sup>1</sup>

<sup>1</sup>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 Worthington</u>	Position: <u>Technical Representative</u>
Printed Name: <u>Lisa A. Worthington</u>	Date: <u>05/20/21</u>

May 17, 2021

Kristen Sarson  
Vertex Engineering - Boston  
100 North Washington St. Suite 302  
Boston, MA 02114

Project Location: 484 Boston Post Rd., Wayland, MA  
Client Job Number:  
Project Number: 67404  
Laboratory Work Order Number: 21E0829

Enclosed are results of analyses for samples received by the laboratory on May 14, 2021. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jessica L. Hoffman  
Project Manager

## Table of Contents

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

Vertex Engineering - Boston  
 100 North Washington St. Suite 302  
 Boston, MA 02114  
 ATTN: Kristen Sarson

REPORT DATE: 5/17/2021

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 67404

#### ANALYTICAL SUMMARY

WORK ORDER NUMBER: 21E0829

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

PROJECT LOCATION: 484 Boston Post Rd., Wayland, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
V501-FR-CONF-N	21E0829-01	Soil		SM 2540G SW-846 6010D	
V502-FR-CONF-S	21E0829-02	Soil		SM 2540G SW-846 6010D	

**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 Pb was requested and reported.

The results of analyses reported only relate to samples submitted to Con-Test, a Pace 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  
Technical Representative

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

Project Location: 484 Boston Post Rd., Wayland, M

Sample Description:

Work Order: 21E0829

Date Received: 5/14/2021

Field Sample #: V501-FR-CONF-N

Sampled: 5/14/2021 09:20

Sample ID: 21E0829-01

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Lead	71	0.52	mg/Kg dry	1		SW-846 6010D	5/17/21	5/17/21 13:17	AJL



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Project Location: 484 Boston Post Rd., Wayland, M

Sample Description:

Work Order: 21E0829

Date Received: 5/14/2021

Field Sample #: V501-FR-CONF-N

Sampled: 5/14/2021 09:20

Sample ID: 21E0829-01

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	96.1		% Wt	1		SM 2540G	5/15/21	5/15/21 15:13	SMC

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

Project Location: 484 Boston Post Rd., Wayland, M

Sample Description:

Work Order: 21E0829

Date Received: 5/14/2021

Field Sample #: V502-FR-CONF-S

Sampled: 5/14/2021 09:20

Sample ID: 21E0829-02

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Lead	27	0.52	mg/Kg dry	1		SW-846 6010D	5/17/21	5/17/21 13:22	AJL

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

Project Location: 484 Boston Post Rd., Wayland, M

Sample Description:

Work Order: 21E0829

Date Received: 5/14/2021

Field Sample #: V502-FR-CONF-S

Sampled: 5/14/2021 09:20

Sample ID: 21E0829-02

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	95.2		% Wt	1		SM 2540G	5/15/21	5/15/21 15:14	SMC

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

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

<b>Lab Number [Field ID]</b>	<b>Batch</b>	<b>Date</b>
21E0829-01 [V501-FR-CONF-N]	B282102	05/15/21
21E0829-02 [V502-FR-CONF-S]	B282102	05/15/21

**Prep Method: SW-846 3050B    Analytical Method: SW-846 6010D**

<b>Lab Number [Field ID]</b>	<b>Batch</b>	<b>Initial [g]</b>	<b>Final [mL]</b>	<b>Date</b>
21E0829-01 [V501-FR-CONF-N]	B282127	1.49	50.0	05/17/21
21E0829-02 [V502-FR-CONF-S]	B282127	1.53	50.0	05/17/21

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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
<b>Batch B282127 - SW-846 3050B</b>										
<b>Blank (B282127-BLK1)</b>										
Prepared & Analyzed: 05/17/21										
Lead	ND	0.50	mg/Kg wet							
<b>LCS (B282127-BS1)</b>										
Prepared & Analyzed: 05/17/21										
Lead	125	1.5	mg/Kg wet	140		89.5	82.9-117.1			
<b>LCS Dup (B282127-BSD1)</b>										
Prepared & Analyzed: 05/17/21										
Lead	137	1.5	mg/Kg wet	140		97.5	82.9-117.1	8.54	30	
<b>Reference (B282127-SRM1)</b>										
Prepared & Analyzed: 05/17/21										
Lead	0.454	0.49	mg/Kg wet	0.485		93.5	80-120			

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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 B282102 - % Solids**
**Duplicate (B282102-DUP2)**
**Source: 21E0829-02**

Prepared &amp; Analyzed: 05/15/21

% Solids	95.1		% Wt		95.2			0.0795	10	
----------	------	--	------	--	------	--	--	--------	----	--

**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.

**CERTIFICATIONS**

**Certified Analyses included in this Report**

**Analyte** **Certifications**

*SW-846 6010D in Soil*

Lead CT,NH,NY,AIHA,ME,VA,NC

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2021
CT	Connecticut Department of Public Health	PH-0165	12/31/2022
NY	New York State Department of Health	10899 NELAP	04/1/2022
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2022
RI	Rhode Island Department of Health	LAO00112	12/30/2021
NC	North Carolina Div. of Water Quality	652	12/31/2021
NJ	New Jersey DEP	MA007 NELAP	06/30/2021
FL	Florida Department of Health	E871027 NELAP	06/30/2021
VT	Vermont Department of Health Lead Laboratory	LL720741	07/30/2021
ME	State of Maine	MA00100	06/9/2021
VA	Commonwealth of Virginia	460217	12/14/2021
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2021
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2021
NC-DW	North Carolina Department of Health	25703	07/31/2021
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2021
MI	Dept. of Env, Great Lakes, and Energy	9100	09/6/2021



21E0829

http://www.contestlabs.com

Doc # 381 Rev 2\_06262019



Phone: 413-525-2332  
Fax: 413-525-6405  
Email: info@contestlabs.com

CHAIN OF CUSTODY RECORD

39 Spruce Street  
East Longmeadow, MA 01028

Page 1 of 1

Vertex Companies Inc.  
Address: 122 N. Washington St. Suite 302  
Phone: 781-917-5300  
Project Name: Rivers Edge  
Project Location: 484 Boston Post Rd, Noyland, MA  
Project Number: 67404  
Project Manager: Kristen Carson  
Con-Test Quote Name/Number:  
Invoice Recipient:  
Sampled By: Madeline Juras

7-Day  10-Day   Field Filtered  
PFAS 10-Day (std)  Due Date:  Lab to Filter  
1-Day  3-Day   Field Filtered  
2-Day  4-Day   Lab to Filter  
Format: PDF  EXCEL   
Other: X Equis  
CLP Like Data Pkg Required:   
Email To: KCarson@Vertexeng.com  
Fax To #:

ANALYSIS REQUESTED

TCLP Pb	Total Pb	VOCs 8240	SVOCs 8270	ROCA 8 Metals	PCB w/ Soxhlet extraction	TPH 8015	DH	Reactivity, Conductivity	Ignitability	TCLP (if triggered)
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2 Preservation Code

Total Number Of:

VIALS \_\_\_\_\_  
GLASS \_\_\_\_\_  
PLASTIC \_\_\_\_\_  
BACTERIA \_\_\_\_\_  
ENCORE \_\_\_\_\_

Glassware in the fridge? Y / N  
Glassware in freezer? Y / N  
Prepackaged Cooler? Y / N  
\*Contest is not responsible for missing samples from prepacked coolers

Con-Test Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	TCLP Pb	Total Pb	VOCs 8240	SVOCs 8270	ROCA 8 Metals	PCB w/ Soxhlet extraction	TPH 8015	DH	Reactivity, Conductivity	Ignitability	TCLP (if triggered)	
	#12 Firing Range	5/19/21	9:30	Comp	S							X											
	#13 Firing Range		9:32									X											
01	V501-FR-CONF-N		9:20										X										
02	V502-FR-CONF-S		9:20										X										
	V-401-DISP-FR		10:45											X	X	X	X	X	X	X	X	X	X
	V-402-DISP-FR		10:00											X	X	X	X	X	X	X	X	X	X

1 Matrix Codes:  
GW = Ground Water  
WW = Waste Water  
DW = Drinking Water  
A = Air  
S = Soil  
SL = Sludge  
SOL = Solid  
O = Other (please define)

Relinquished by: (signature) [Signature]  
Date/Time: 5/14/21  
Received by: (signature) [Signature]  
Date/Time: 5/14/21  
Relinquished by: (signature) [Signature]  
Date/Time: 5/14/21  
Received by: (signature) [Signature]  
Date/Time: 5/14/21  
Relinquished by: (signature) [Signature]  
Date/Time: 5/14/21  
Received by: (signature) [Signature]  
Date/Time: 5/14/21  
Relinquished by: (signature) [Signature]  
Date/Time: 5/14/21  
Received by: (signature) [Signature]  
Date/Time: 5/14/21

Client Comments:  
→ TCLP lead samples = 48hr TAT / ON-HOLD  
→ Dispose 1 set (V-402-DISP-FR + V-401-DISP-FR) = 5 day TAT

Detection Limit Requirements:  X

Special Requirements: MA MCLP Required   
MA MCLP Reporting Form Required   
MCLP Reporting Form Required   
MCLP Reporting Form Required   
MA State VWR Required

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

Project Entity: Government  Municipality  MWRA  WRTA   
Federal  21 J  School   
City  Brownfield  MBTA

Other:  Chromatogram   
 AIHA-LAP, LLC

2 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)

PCB ONLY  
 Soxhlet  
 Non Soxhlet

Comments: per client request a 24 hour tat. JLH 5/16/2021

Disclaimer: Con-Test Labs is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Con Test values your partnership on each project and will try to assist with missing information, but will not be held accountable.

I Have Not Confirmed Sample Container Numbers With Lab Staff Before Relinquishing Over Samples \_\_\_\_\_



**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 Verdex

Received By RUF Date 5/14/21 Time 1242

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 # 3 Actual Temp - 3.10°C  
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 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? LA

Are there Short Holds? F Who was notified? \_\_\_\_\_

Is there enough Volume? T

Is there Headspace where applicable? NA 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? \_\_\_\_\_ Acid NA Base NA

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-		Flashpoint		Col./Bacteria	2oz Amb/Clear
DI-		Other Glass		Other Plastic	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, a Pace Analytical Laboratory	Project #: 21E0829
Project Location: 484 Boston Post Rd., Wayland, MA	RTN:

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]  
21E0829-01 thru 21E0829-02

Matrices: Soil

**CAM Protocol (check all that below)**

8260 VOC CAM II A ( )	7470/7471 Hg CAM IIIB ( )	MassDEP VPH CAM IV A ( )	8082 PCB CAM V A ( )	9014 Total Cyanide/PAC CAM VI A ( )	6860 Perchlorate CAM VIII B ( )
8270 SVOC CAM II B ( )	7010 Metals CAM III C ( )	MassDEP VPH CAM IV C ( )	8081 Pesticides CAM V B ( )	7196 Hex Cr CAM VI B ( )	MassDEP APH CAM IX A ( )
6010 Metals CAM III A (X)	6020 Metals CAM III D ( )	MassDEP EPH CAM IV B ( )	8151 Herbicides CAM V C ( )	8330 Explosives CAM VIII A ( )	TO-15 VOC CAM IX B ( )

**Affirmative response to Questions A through F is required for "Presumptive Certainty" status**

<b>A</b>	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?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>B</b>	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>C</b>	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>D</b>	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?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>E a</b>	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).	<input type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>E b</b>	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	<input type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>F</b>	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)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>

**A response to questions G, H and I below is required for "Presumptive Certainty" status**

<b>G</b>	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
----------	---	--

**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.**

<b>H</b>	Were all QC performance standards specified in the CAM protocol(s) achieved?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>I</b>	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <sup>1</sup>

<sup>1</sup>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 Worthington</u>	Position: <u>Technical Representative</u>
Printed Name: <u>Lisa A. Worthington</u>	Date: <u>05/17/21</u>

May 28, 2021

Kristen Sarson  
Vertex Engineering - Boston  
100 North Washington St. Suite 302  
Boston, MA 02114

Project Location: 484 New Boston Rd  
Client Job Number:  
Project Number: 67404  
Laboratory Work Order Number: 21E1391

Enclosed are results of analyses for samples received by the laboratory on May 25, 2021. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jessica L. Hoffman  
Project Manager

## Table of Contents

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

Vertex Engineering - Boston  
100 North Washington St. Suite 302  
Boston, MA 02114  
ATTN: Kristen Sarson

REPORT DATE: 5/28/2021

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 67404

**ANALYTICAL SUMMARY**

---

WORK ORDER NUMBER: 21E1391

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

PROJECT LOCATION: 484 New Boston Rd

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
V-202(MW)-20210524	21E1391-01	Ground Water		SM 21-22 4500 P E SM21-22 4500 H B SW-846 6020B	

**CASE NARRATIVE SUMMARY**

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

**SM21-22 4500 H B**

**Qualifications:**

**H-05**

Holding time was exceeded. pH analysis should be performed immediately at time of sampling. Nominal 15 minute holding time was exceeded.

**Analyte & Sample(s) Qualified:**

**pH**

21E1391-01[V-202(MW)-20210524], B282806-DUP1

The results of analyses reported only relate to samples submitted to Con-Test, a Pace 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  
Technical Representative

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

Project Location: 484 New Boston Rd

Sample Description:

Work Order: 21E1391

Date Received: 5/25/2021

Field Sample #: V-202(MW)-20210524

Sampled: 5/24/2021 10:30

Sample ID: 21E1391-01

Sample Matrix: Ground Water

**Metals Analyses (Dissolved)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.0	µg/L	1		SW-846 6020B	5/25/21	5/27/21 13:13	QNW
Lead	ND	0.50	µg/L	1		SW-846 6020B	5/25/21	5/27/21 13:13	QNW
Nickel	12	5.0	µg/L	1		SW-846 6020B	5/25/21	5/27/21 13:13	QNW



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

Project Location: 484 New Boston Rd

Sample Description:

Work Order: 21E1391

Date Received: 5/25/2021

Field Sample #: V-202(MW)-20210524

Sampled: 5/24/2021 10:30

Sample ID: 21E1391-01

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
pH @17.2°C	6.7		pH Units	1	H-05	SM21-22 4500 H B	5/25/21	5/25/21 20:30	ALG
Phosphorus, Total	0.087	0.050	mg/L	1		SM 21-22 4500 P E	5/26/21	5/26/21 11:05	EC

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**Sample Extraction Data****SM 21-22 4500 P E**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
21E1391-01 [V-202(MW)-20210524]	B282829	50.0	50.0	05/26/21

**SM21-22 4500 H B**

Lab Number [Field ID]	Batch	Initial [mL]	Date
21E1391-01 [V-202(MW)-20210524]	B282806	50.0	05/25/21

Prep Method: SW-846 3005A Dissolved    Analytical Method: SW-846 6020B

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
21E1391-01 [V-202(MW)-20210524]	B282803	50.0	50.0	05/25/21

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**QUALITY CONTROL**
**Metals Analyses (Dissolved) - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B282803 - SW-846 3005A Dissolved</b>									
<b>Blank (B282803-BLK1)</b>				Prepared: 05/26/21 Analyzed: 05/27/21					
Antimony	ND	1.0	µg/L						
Lead	ND	0.50	µg/L						
Nickel	ND	5.0	µg/L						
<b>LCS (B282803-BS1)</b>				Prepared: 05/26/21 Analyzed: 05/27/21					
Antimony	550	10	µg/L	500		110	80-120		
Lead	514	5.0	µg/L	500		103	80-120		
Nickel	503	50	µg/L	500		101	80-120		
<b>LCS Dup (B282803-BSD1)</b>				Prepared: 05/26/21 Analyzed: 05/27/21					
Antimony	559	10	µg/L	500		112	80-120	1.67	20
Lead	518	5.0	µg/L	500		104	80-120	0.685	20
Nickel	509	50	µg/L	500		102	80-120	1.12	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
<b>Batch B282806 - SM21-22 4500 H B</b>										
<b>LCS (B282806-BS1)</b>				Prepared & Analyzed: 05/25/21						
pH	5.99		pH Units	6.00		99.9	90-110			
<b>Duplicate (B282806-DUP1)</b>				Source: 21E1391-01 Prepared & Analyzed: 05/25/21						
pH	6.6		pH Units		6.7			2.50	5	H-05
<b>Batch B282829 - SM 21-22 4500 P E</b>										
<b>Blank (B282829-BLK1)</b>				Prepared & Analyzed: 05/26/21						
Phosphorus, Total	ND	0.050	mg/L							
<b>LCS (B282829-BS1)</b>				Prepared & Analyzed: 05/26/21						
Phosphorus, Total	0.19	0.050	mg/L	0.167		112	76.5-122			
<b>LCS Dup (B282829-BSD1)</b>				Prepared & Analyzed: 05/26/21						
Phosphorus, Total	0.20	0.050	mg/L	0.167		118	76.5-122	5.54	12.6	

**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.
H-05	Holding time was exceeded. pH analysis should be performed immediately at time of sampling. Nominal 15 minute holding time was exceeded.

**CERTIFICATIONS**

**Certified Analyses included in this Report**

Analyte	Certifications
<b>SM 21-22 4500 P E in Water</b>	
Phosphorus, Total	CT,MA,NH,NY,RI,NC,ME,VA
<b>SM21-22 4500 H B in Water</b>	
pH	CT,MA,RI
<b>SW-846 6020B in Water</b>	
Antimony	CT,NH,NY,ME,VA,NC
Lead	CT,NH,NY,NC,ME,VA
Nickel	CT,NH,NY,NC,ME,VA

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2021
CT	Connecticut Department of Public Health	PH-0165	12/31/2022
NY	New York State Department of Health	10899 NELAP	04/1/2022
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2022
RI	Rhode Island Department of Health	LAO00112	12/30/2021
NC	North Carolina Div. of Water Quality	652	12/31/2021
NJ	New Jersey DEP	MA007 NELAP	06/30/2021
FL	Florida Department of Health	E871027 NELAP	06/30/2021
VT	Vermont Department of Health Lead Laboratory	LL720741	07/30/2021
ME	State of Maine	MA00100	06/9/2021
VA	Commonwealth of Virginia	460217	12/14/2021
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2021
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2021
NC-DW	North Carolina Department of Health	25703	07/31/2021
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2022
MI	Dept. of Env, Great Lakes, and Energy	9100	09/6/2021



CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY - Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

21E1391

ALL SHADED AREAS are for LAB USE ONLY

Company: Vertex, Billing Information, Address: 100 North Washington St. Suite 302 Boston, MA 02114, Report To: Kristen BenSarsan, Email To: KSarsan@vertexeng.com, Copy To: 484 New Boston RD, Customer Project Name/Number: 67404, State: MA, County/City, Time Zone Collected: [ ] PT [ ] MT [ ] CT [ ] ET [X] ET, Compliance Monitoring?, DW PWS ID #, DW Location Code, Immediately Packed on Ice: [X] Yes [ ] No, Field Filtered (if applicable): [X] Yes [ ] No, Analysis: [ ] 2 Day [ ] 3 Day [ ] 4 Day [X] 5 Day (Expedite Charges Apply)

Container Preservative Type \*\*, Lab Project Manager, \*\* Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other

Table with columns for Analyses (Total Phosphorus, Dissolved Antimony, Dissolved Nickel, Dissolved Lead, pH) and Lab Profile/Line (Lab Sample Receipt Checklist: Custody Seals Present/Intact, Custody Signatures Present, Collector Signature Present, Bottles Intact, Correct Bottles, Sufficient Volume, Samples Received on Ice, VOA - Headspace Acceptable, USDA Regulated Soils, Samples in Holding Time, Residual Chlorine Present, Cl Strips, Sample pH Acceptable, pH Strips, Sulfide Present, Lead Acetate Strips)

client does need MCP. JLH 5/26/2021

Customer Remarks / Special Conditions / Possible Hazards: Type of Ice Used: Wet Blue Dry None, SHORT HOLDS PRESENT (<72 hours): Y N N/A, Packing Material Used, Lab Tracking #: 2674027, Radchem sample(s) screened (<500 cpm): Y N NA, Samples received via: FEDEX UPS Client Courier Pace Courier

Lab Sample Temperature Info: Temp Blank Received: Y N NA, Therm ID#: \_\_\_\_\_, Cooler 1 Temp Upon Receipt: \_\_\_\_\_ oC, Cooler 1 Therm Corr. Factor: \_\_\_\_\_ oC, Cooler 1 Corrected Temp: \_\_\_\_\_ oC, Comments: Trip Blank Received: Y N NA, HCL MeOH TSP Other, Non Conformance(s): YES / NO, Page: \_\_\_\_\_ of: \_\_\_\_\_

Signature/Date grid with 3 rows and 4 columns for Date/Time, Received by/Company: (Signature), Date/Time

I Have Not Confirmed Sample Container Numbers With Lab Staff Before Relinquishing Over Samples \_\_\_\_\_



**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 Vertex

Received By [Signature] Date 5/25/20 Time 1414

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 # 2 Actual Temp - 4.4  
 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 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? F Who was notified? \_\_\_\_\_  
 Are there Short Holds? T Who was notified? Cassie

Is there enough Volume? T  
 Is there Headspace where applicable? n/a 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? Acid T Base n/a

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

**Unused Media**

Vials	#	Containers:	#	#	#
Unp-		1 Liter Amb.		1 Liter Plastic	
HCL-		500 mL Amb.		500 mL Plastic	
Meoh-		250 mL Amb.		250 mL Plastic	
Bisulfate-		Col./Bacteria		Flashpoint	
DI-		Other Plastic		Other Glass	
Thiosulfate-		SOC Kit		Plastic Bag	
Sulfuric-		Perchlorate		Ziplock	

Comments:



June 22, 2021

Kristen Sarson  
Vertex Engineering - Boston  
100 North Washington St. Suite 302  
Boston, MA 02114

Project Location: Wayland, MA  
Client Job Number:  
Project Number: 67404  
Laboratory Work Order Number: 21F1036

Enclosed are results of analyses for samples received by the laboratory on June 17, 2021. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jessica L. Hoffman  
Project Manager

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

 Vertex Engineering - Boston  
 100 North Washington St. Suite 302  
 Boston, MA 02114  
 ATTN: Kristen Sarson

REPORT DATE: 6/22/2021

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 67404

**ANALYTICAL SUMMARY**

WORK ORDER NUMBER: 21F1036

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

PROJECT LOCATION: Wayland, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
V-301-SP-20210617	21F1036-01	Soil		MADEP EPH rev 2.1 SM 2540G SM21-22 2510B Modified SW-846 1030 SW-846 6010D SW-846 7471B SW-846 8082A SW-846 8260C-D SW-846 8270D-E SW-846 9014 SW-846 9030A SW-846 9045C	
V-302-20210617	21F1036-02	Soil		MADEP EPH rev 2.1 SM 2540G SM21-22 2510B Modified SW-846 1030 SW-846 6010D SW-846 7471B SW-846 8082A SW-846 8260C-D SW-846 8270D-E SW-846 9014 SW-846 9030A SW-846 9045C	

**CASE NARRATIVE SUMMARY**

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

For method MA EPH, only hydrocarbon ranges were requested and reported.

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332  
SW-846 6010D

**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:****Barium**

B284271-BSD1

**Cadmium**

B284271-BS1

**Chromium**

B284271-BS1

**Nickel**

B284271-BS1

**Thallium**

B284271-BS1

SW-846 8082A

**Qualifications:****O-32**

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

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

21F1036-01[V-301-SP-20210617], 21F1036-02[V-302-20210617]

SW-846 8260C-D

**Qualifications:****V-05**

Continuing calibration verification (CCV) did not meet method specifications and was biased on the low side for this compound.

**Analyte & Samples(s) Qualified:****Dichlorodifluoromethane (Freon 12)**

21F1036-01[V-301-SP-20210617], 21F1036-02[V-302-20210617], B284263-BLK1, B284263-BS1, B284263-BSD1, S060805-CCV1

**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**

S060805-CCV1

**V-20**

Continuing calibration verification (CCV) 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-Dichloroethane**

B284263-BS1, B284263-BSD1, S060805-CCV1

**1,1-Dichloroethylene**

B284263-BS1, B284263-BSD1, S060805-CCV1

**1,2-Dichloroethane**

B284263-BS1, B284263-BSD1, S060805-CCV1

**Methylene Chloride**

B284263-BS1, B284263-BSD1, S060805-CCV1

**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**

21F1036-01[V-301-SP-20210617], 21F1036-02[V-302-20210617], B284263-BLK1, B284263-BS1, B284263-BSD1, S060805-CCV1

SW-846 8270D-E

**Qualifications:**

**V-05**

Continuing calibration verification (CCV) did not meet method specifications and was biased on the low side for this compound.

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

**Aniline**

21F1036-01[V-301-SP-20210617], S060828-CCV1

**Pentachlorophenol**

21F1036-02[V-302-20210617], B284265-BLK1, B284265-BS1, B284265-BSD1, S060785-CCV1, S060815-CCV1

**V-06**

Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side for this compound.

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

**Bis(2-Ethylhexyl)phthalate**

21F1036-02[V-302-20210617], S060815-CCV1

**Di-n-octylphthalate**

S060815-CCV1

**V-20**

Continuing calibration verification (CCV) 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:**

**Di-n-octylphthalate**

21F1036-02[V-302-20210617]

**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:**

**4-Chloroaniline**

21F1036-01[V-301-SP-20210617], 21F1036-02[V-302-20210617], B284265-BLK1, B284265-BS1, B284265-BSD1, S060785-CCV1, S060815-CCV1, S060828-CCV1

**Aniline**

21F1036-02[V-302-20210617], B284265-BLK1, B284265-BS1, B284265-BSD1, S060785-CCV1, S060815-CCV1

The results of analyses reported only relate to samples submitted to Con-Test, a Pace 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  
Technical Representative

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

Project Location: Wayland, MA

Sample Description:

Work Order: 21F1036

Date Received: 6/17/2021

Field Sample #: V-301-SP-20210617

Sampled: 6/17/2021 10:45

Sample ID: 21F1036-01

Sample Matrix: Soil

## Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.098	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:25	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00098	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:25	MFF
Benzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:25	MFF
Bromobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:25	MFF
Bromochloromethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:25	MFF
Bromodichloromethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:25	MFF
Bromoform	ND	0.0020	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:25	MFF
Bromomethane	ND	0.0098	mg/Kg dry	1	V-34	SW-846 8260C-D	6/18/21	6/18/21 8:25	MFF
2-Butanone (MEK)	ND	0.039	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:25	MFF
n-Butylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:25	MFF
sec-Butylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:25	MFF
tert-Butylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:25	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00098	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:25	MFF
Carbon Disulfide	ND	0.0059	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:25	MFF
Carbon Tetrachloride	ND	0.0020	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:25	MFF
Chlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:25	MFF
Chlorodibromomethane	ND	0.00098	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:25	MFF
Chloroethane	ND	0.0098	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:25	MFF
Chloroform	ND	0.0039	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:25	MFF
Chloromethane	ND	0.0098	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:25	MFF
2-Chlorotoluene	ND	0.0020	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:25	MFF
4-Chlorotoluene	ND	0.0020	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:25	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0020	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:25	MFF
1,2-Dibromoethane (EDB)	ND	0.00098	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:25	MFF
Dibromomethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:25	MFF
1,2-Dichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:25	MFF
1,3-Dichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:25	MFF
1,4-Dichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:25	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0098	mg/Kg dry	1	V-05	SW-846 8260C-D	6/18/21	6/18/21 8:25	MFF
1,1-Dichloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:25	MFF
1,2-Dichloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:25	MFF
1,1-Dichloroethylene	ND	0.0039	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:25	MFF
cis-1,2-Dichloroethylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:25	MFF
trans-1,2-Dichloroethylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:25	MFF
1,2-Dichloropropane	ND	0.0020	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:25	MFF
1,3-Dichloropropane	ND	0.00098	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:25	MFF
2,2-Dichloropropane	ND	0.0020	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:25	MFF
1,1-Dichloropropene	ND	0.0020	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:25	MFF
cis-1,3-Dichloropropene	ND	0.00098	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:25	MFF
trans-1,3-Dichloropropene	ND	0.00098	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:25	MFF
Diethyl Ether	ND	0.0098	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:25	MFF
Diisopropyl Ether (DIPE)	ND	0.00098	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:25	MFF
1,4-Dioxane	ND	0.098	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:25	MFF
Ethylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:25	MFF



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

Project Location: Wayland, MA

Sample Description:

Work Order: 21F1036

Date Received: 6/17/2021

Field Sample #: V-301-SP-20210617

Sampled: 6/17/2021 10:45

Sample ID: 21F1036-01

Sample Matrix: Soil

## Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0020	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:25	MFF
2-Hexanone (MBK)	ND	0.020	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:25	MFF
Isopropylbenzene (Cumene)	ND	0.0020	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:25	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0020	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:25	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0039	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:25	MFF
Methylene Chloride	ND	0.0098	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:25	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.020	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:25	MFF
Naphthalene	ND	0.0039	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:25	MFF
n-Propylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:25	MFF
Styrene	ND	0.0020	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:25	MFF
1,1,1,2-Tetrachloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:25	MFF
1,1,1,2,2-Tetrachloroethane	ND	0.00098	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:25	MFF
Tetrachloroethylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:25	MFF
Tetrahydrofuran	ND	0.0098	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:25	MFF
Toluene	ND	0.0020	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:25	MFF
1,2,3-Trichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:25	MFF
1,2,4-Trichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:25	MFF
1,1,1-Trichloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:25	MFF
1,1,2-Trichloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:25	MFF
Trichloroethylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:25	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0098	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:25	MFF
1,2,3-Trichloropropane	ND	0.0020	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:25	MFF
1,2,4-Trimethylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:25	MFF
1,3,5-Trimethylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:25	MFF
Vinyl Chloride	ND	0.0098	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:25	MFF
m+p Xylene	ND	0.0039	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:25	MFF
o-Xylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:25	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	109	70-130	6/18/21 8:25
Toluene-d8	97.8	70-130	6/18/21 8:25
4-Bromofluorobenzene	96.3	70-130	6/18/21 8:25

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

Project Location: Wayland, MA

Sample Description:

Work Order: 21F1036

Date Received: 6/17/2021

Field Sample #: V-301-SP-20210617

Sampled: 6/17/2021 10:45

Sample ID: 21F1036-01

Sample Matrix: Soil

## Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.19	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/22/21 10:11	BGL
Acenaphthylene	ND	0.19	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/22/21 10:11	BGL
Acetophenone	ND	0.37	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/22/21 10:11	BGL
Aniline	ND	0.37	mg/Kg dry	1	V-05	SW-846 8270D-E	6/18/21	6/22/21 10:11	BGL
Anthracene	ND	0.19	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/22/21 10:11	BGL
Benzo(a)anthracene	ND	0.19	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/22/21 10:11	BGL
Benzo(a)pyrene	ND	0.19	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/22/21 10:11	BGL
Benzo(b)fluoranthene	ND	0.19	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/22/21 10:11	BGL
Benzo(g,h,i)perylene	ND	0.19	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/22/21 10:11	BGL
Benzo(k)fluoranthene	ND	0.19	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/22/21 10:11	BGL
Bis(2-chloroethoxy)methane	ND	0.37	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/22/21 10:11	BGL
Bis(2-chloroethyl)ether	ND	0.37	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/22/21 10:11	BGL
Bis(2-chloroisopropyl)ether	ND	0.37	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/22/21 10:11	BGL
Bis(2-Ethylhexyl)phthalate	ND	0.37	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/22/21 10:11	BGL
4-Bromophenylphenylether	ND	0.37	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/22/21 10:11	BGL
Butylbenzylphthalate	ND	0.37	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/22/21 10:11	BGL
4-Chloroaniline	ND	0.73	mg/Kg dry	1	V-34	SW-846 8270D-E	6/18/21	6/22/21 10:11	BGL
2-Chloronaphthalene	ND	0.37	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/22/21 10:11	BGL
2-Chlorophenol	ND	0.37	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/22/21 10:11	BGL
Chrysene	ND	0.19	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/22/21 10:11	BGL
Dibenz(a,h)anthracene	ND	0.19	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/22/21 10:11	BGL
Dibenzofuran	ND	0.37	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/22/21 10:11	BGL
Di-n-butylphthalate	ND	0.37	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/22/21 10:11	BGL
1,2-Dichlorobenzene	ND	0.37	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/22/21 10:11	BGL
1,3-Dichlorobenzene	ND	0.37	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/22/21 10:11	BGL
1,4-Dichlorobenzene	ND	0.37	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/22/21 10:11	BGL
3,3-Dichlorobenzidine	ND	0.19	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/22/21 10:11	BGL
2,4-Dichlorophenol	ND	0.37	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/22/21 10:11	BGL
Diethylphthalate	ND	0.37	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/22/21 10:11	BGL
2,4-Dimethylphenol	ND	0.37	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/22/21 10:11	BGL
Dimethylphthalate	ND	0.37	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/22/21 10:11	BGL
2,4-Dinitrophenol	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/22/21 10:11	BGL
2,4-Dinitrotoluene	ND	0.37	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/22/21 10:11	BGL
2,6-Dinitrotoluene	ND	0.37	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/22/21 10:11	BGL
Di-n-octylphthalate	ND	0.37	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/22/21 10:11	BGL
1,2-Diphenylhydrazine/Azobenzene	ND	0.37	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/22/21 10:11	BGL
Fluoranthene	ND	0.19	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/22/21 10:11	BGL
Fluorene	ND	0.19	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/22/21 10:11	BGL
Hexachlorobenzene	ND	0.37	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/22/21 10:11	BGL
Hexachlorobutadiene	ND	0.37	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/22/21 10:11	BGL
Hexachloroethane	ND	0.37	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/22/21 10:11	BGL
Indeno(1,2,3-cd)pyrene	ND	0.19	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/22/21 10:11	BGL
Isophorone	ND	0.37	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/22/21 10:11	BGL
2-Methylnaphthalene	ND	0.19	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/22/21 10:11	BGL

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

Project Location: Wayland, MA

Sample Description:

Work Order: 21F1036

Date Received: 6/17/2021

Field Sample #: V-301-SP-20210617

Sampled: 6/17/2021 10:45

Sample ID: 21F1036-01

Sample Matrix: Soil

## Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	0.37	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/22/21 10:11	BGL
3/4-Methylphenol	ND	0.37	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/22/21 10:11	BGL
Naphthalene	ND	0.19	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/22/21 10:11	BGL
Nitrobenzene	ND	0.37	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/22/21 10:11	BGL
2-Nitrophenol	ND	0.37	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/22/21 10:11	BGL
4-Nitrophenol	ND	0.73	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/22/21 10:11	BGL
Pentachlorophenol	ND	0.37	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/22/21 10:11	BGL
Phenanthrene	ND	0.19	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/22/21 10:11	BGL
Phenol	ND	0.37	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/22/21 10:11	BGL
Pyrene	ND	0.19	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/22/21 10:11	BGL
Pyridine	ND	0.37	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/22/21 10:11	BGL
1,2,4-Trichlorobenzene	ND	0.37	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/22/21 10:11	BGL
2,4,5-Trichlorophenol	ND	0.37	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/22/21 10:11	BGL
2,4,6-Trichlorophenol	ND	0.37	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/22/21 10:11	BGL
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2-Fluorophenol		34.0	30-130					6/22/21 10:11	
Phenol-d6		47.1	30-130					6/22/21 10:11	
Nitrobenzene-d5		44.2	30-130					6/22/21 10:11	
2-Fluorobiphenyl		50.3	30-130					6/22/21 10:11	
2,4,6-Tribromophenol		48.0	30-130					6/22/21 10:11	
p-Terphenyl-d14		62.5	30-130					6/22/21 10:11	

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Project Location: Wayland, MA

Sample Description:

Work Order: 21F1036

Date Received: 6/17/2021

Field Sample #: V-301-SP-20210617

Sampled: 6/17/2021 10:45

Sample ID: 21F1036-01

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.089	0.040	mg/Kg dry	4		SW-846 8082A	6/17/21	6/21/21 23:23	AYH
Aroclor-1221 [1]	ND	0.089	0.067	mg/Kg dry	4		SW-846 8082A	6/17/21	6/21/21 23:23	AYH
Aroclor-1232 [1]	ND	0.089	0.080	mg/Kg dry	4		SW-846 8082A	6/17/21	6/21/21 23:23	AYH
Aroclor-1242 [1]	ND	0.089	0.067	mg/Kg dry	4		SW-846 8082A	6/17/21	6/21/21 23:23	AYH
Aroclor-1248 [1]	ND	0.089	0.031	mg/Kg dry	4		SW-846 8082A	6/17/21	6/21/21 23:23	AYH
Aroclor-1254 [1]	ND	0.089	0.036	mg/Kg dry	4		SW-846 8082A	6/17/21	6/21/21 23:23	AYH
Aroclor-1260 [1]	ND	0.089	0.049	mg/Kg dry	4		SW-846 8082A	6/17/21	6/21/21 23:23	AYH
Aroclor-1262 [1]	ND	0.089	0.044	mg/Kg dry	4		SW-846 8082A	6/17/21	6/21/21 23:23	AYH
Aroclor-1268 [1]	ND	0.089	0.071	mg/Kg dry	4		SW-846 8082A	6/17/21	6/21/21 23:23	AYH
Surrogates		% Recovery	Recovery Limits			Flag/Qual				
Decachlorobiphenyl [1]		68.6	30-150						6/21/21 23:23	
Decachlorobiphenyl [2]		72.9	30-150						6/21/21 23:23	
Tetrachloro-m-xylene [1]		74.2	30-150						6/21/21 23:23	
Tetrachloro-m-xylene [2]		78.0	30-150						6/21/21 23:23	

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Project Location: Wayland, MA

Sample Description:

Work Order: 21F1036

Date Received: 6/17/2021

Field Sample #: V-301-SP-20210617

Sampled: 6/17/2021 10:45

Sample ID: 21F1036-01

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses - EPH**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	22	mg/Kg dry	2		MADEP EPH rev 2.1	6/17/21	6/22/21 11:31	AYH
C19-C36 Aliphatics	53	22	mg/Kg dry	2		MADEP EPH rev 2.1	6/17/21	6/22/21 11:31	AYH
Unadjusted C11-C22 Aromatics	56	22	mg/Kg dry	2		MADEP EPH rev 2.1	6/17/21	6/22/21 11:31	AYH
C11-C22 Aromatics	53	22	mg/Kg dry	2		MADEP EPH rev 2.1	6/17/21	6/22/21 11:31	AYH
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
Chlorooctadecane (COD)	56.8		40-140				6/22/21 11:31		
o-Terphenyl (OTP)	56.1		40-140				6/22/21 11:31		
2-Bromonaphthalene	79.9		40-140				6/22/21 11:31		
2-Fluorobiphenyl	76.4		40-140				6/22/21 11:31		

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Project Location: Wayland, MA

Sample Description:

Work Order: 21F1036

Date Received: 6/17/2021

Field Sample #: V-301-SP-20210617

Sampled: 6/17/2021 10:45

Sample ID: 21F1036-01

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.8	mg/Kg dry	1		SW-846 6010D	6/18/21	6/18/21 19:12	AJL
Arsenic	6.2	3.7	mg/Kg dry	1		SW-846 6010D	6/22/21	6/22/21 16:11	MJH
Barium	23	1.8	mg/Kg dry	1		SW-846 6010D	6/18/21	6/18/21 19:12	AJL
Beryllium	0.34	0.18	mg/Kg dry	1		SW-846 6010D	6/18/21	6/18/21 19:12	AJL
Cadmium	ND	0.37	mg/Kg dry	1		SW-846 6010D	6/18/21	6/18/21 19:12	AJL
Chromium	11	0.73	mg/Kg dry	1		SW-846 6010D	6/18/21	6/18/21 19:12	AJL
Lead	28	0.55	mg/Kg dry	1		SW-846 6010D	6/22/21	6/22/21 16:11	MJH
Mercury	ND	0.027	mg/Kg dry	1		SW-846 7471B	6/21/21	6/22/21 11:39	CJV
Nickel	8.3	0.73	mg/Kg dry	1		SW-846 6010D	6/18/21	6/18/21 19:12	AJL
Selenium	ND	3.7	mg/Kg dry	1		SW-846 6010D	6/18/21	6/21/21 14:06	AJL
Silver	ND	0.37	mg/Kg dry	1		SW-846 6010D	6/22/21	6/22/21 16:11	MJH
Thallium	ND	1.8	mg/Kg dry	1		SW-846 6010D	6/18/21	6/18/21 19:12	AJL
Vanadium	17	0.73	mg/Kg dry	1		SW-846 6010D	6/18/21	6/18/21 19:12	AJL
Zinc	26	0.73	mg/Kg dry	1		SW-846 6010D	6/18/21	6/18/21 19:12	AJL

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Project Location: Wayland, MA

Sample Description:

Work Order: 21F1036

Date Received: 6/17/2021

Field Sample #: V-301-SP-20210617

Sampled: 6/17/2021 10:45

Sample ID: 21F1036-01

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	90.1		% Wt	1		SM 2540G	6/18/21	6/19/21 8:28	JML
Ignitability	Absent		present/absent	1		SW-846 1030	6/18/21	6/18/21 17:05	DJM
pH @18.2°C	6.4		pH Units	1		SW-846 9045C	6/17/21	6/17/21 20:40	CB2
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	6/18/21	6/20/21 15:35	YR
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	6/18/21	6/20/21 14:27	YR
Specific conductance	4.8	2.0	µmhos/cm	1		SM21-22 2510B Modified	6/18/21	6/18/21 15:00	EC

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Project Location: Wayland, MA

Sample Description:

Work Order: 21F1036

Date Received: 6/17/2021

Field Sample #: V-302-20210617

Sampled: 6/17/2021 11:00

Sample ID: 21F1036-02

Sample Matrix: Soil

## Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.088	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:49	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00088	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:49	MFF
Benzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:49	MFF
Bromobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:49	MFF
Bromochloromethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:49	MFF
Bromodichloromethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:49	MFF
Bromoform	ND	0.0018	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:49	MFF
Bromomethane	ND	0.0088	mg/Kg dry	1	V-34	SW-846 8260C-D	6/18/21	6/18/21 8:49	MFF
2-Butanone (MEK)	ND	0.035	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:49	MFF
n-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:49	MFF
sec-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:49	MFF
tert-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:49	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00088	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:49	MFF
Carbon Disulfide	ND	0.0053	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:49	MFF
Carbon Tetrachloride	ND	0.0018	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:49	MFF
Chlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:49	MFF
Chlorodibromomethane	ND	0.00088	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:49	MFF
Chloroethane	ND	0.0088	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:49	MFF
Chloroform	ND	0.0035	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:49	MFF
Chloromethane	ND	0.0088	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:49	MFF
2-Chlorotoluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:49	MFF
4-Chlorotoluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:49	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0018	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:49	MFF
1,2-Dibromoethane (EDB)	ND	0.00088	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:49	MFF
Dibromomethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:49	MFF
1,2-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:49	MFF
1,3-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:49	MFF
1,4-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:49	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0088	mg/Kg dry	1	V-05	SW-846 8260C-D	6/18/21	6/18/21 8:49	MFF
1,1-Dichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:49	MFF
1,2-Dichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:49	MFF
1,1-Dichloroethylene	ND	0.0035	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:49	MFF
cis-1,2-Dichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:49	MFF
trans-1,2-Dichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:49	MFF
1,2-Dichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:49	MFF
1,3-Dichloropropane	ND	0.00088	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:49	MFF
2,2-Dichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:49	MFF
1,1-Dichloropropene	ND	0.0018	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:49	MFF
cis-1,3-Dichloropropene	ND	0.00088	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:49	MFF
trans-1,3-Dichloropropene	ND	0.00088	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:49	MFF
Diethyl Ether	ND	0.0088	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:49	MFF
Diisopropyl Ether (DIPE)	ND	0.00088	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:49	MFF
1,4-Dioxane	ND	0.088	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:49	MFF
Ethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:49	MFF



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Project Location: Wayland, MA

Sample Description:

Work Order: 21F1036

Date Received: 6/17/2021

Field Sample #: V-302-20210617

Sampled: 6/17/2021 11:00

Sample ID: 21F1036-02

Sample Matrix: Soil

## Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0018	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:49	MFF
2-Hexanone (MBK)	ND	0.018	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:49	MFF
Isopropylbenzene (Cumene)	ND	0.0018	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:49	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0018	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:49	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0035	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:49	MFF
Methylene Chloride	ND	0.0088	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:49	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.018	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:49	MFF
Naphthalene	ND	0.0035	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:49	MFF
n-Propylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:49	MFF
Styrene	ND	0.0018	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:49	MFF
1,1,1,2-Tetrachloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:49	MFF
1,1,2,2-Tetrachloroethane	ND	0.00088	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:49	MFF
Tetrachloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:49	MFF
Tetrahydrofuran	ND	0.0088	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:49	MFF
Toluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:49	MFF
1,2,3-Trichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:49	MFF
1,2,4-Trichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:49	MFF
1,1,1-Trichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:49	MFF
1,1,2-Trichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:49	MFF
Trichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:49	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0088	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:49	MFF
1,2,3-Trichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:49	MFF
1,2,4-Trimethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:49	MFF
1,3,5-Trimethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:49	MFF
Vinyl Chloride	ND	0.0088	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:49	MFF
m+p Xylene	ND	0.0035	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:49	MFF
o-Xylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C-D	6/18/21	6/18/21 8:49	MFF
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
1,2-Dichloroethane-d4		109	70-130					6/18/21 8:49	
Toluene-d8		97.7	70-130					6/18/21 8:49	
4-Bromofluorobenzene		95.4	70-130					6/18/21 8:49	

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Project Location: Wayland, MA

Sample Description:

Work Order: 21F1036

Date Received: 6/17/2021

Field Sample #: V-302-20210617

Sampled: 6/17/2021 11:00

Sample ID: 21F1036-02

Sample Matrix: Soil

## Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	0.30	0.19	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/21/21 13:08	BGL
Acenaphthylene	0.81	0.19	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/21/21 13:08	BGL
Acetophenone	ND	0.38	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/21/21 13:08	BGL
Aniline	ND	0.38	mg/Kg dry	1	V-34	SW-846 8270D-E	6/18/21	6/21/21 13:08	BGL
Anthracene	1.0	0.19	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/21/21 13:08	BGL
Benzo(a)anthracene	2.6	0.19	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/21/21 13:08	BGL
Benzo(a)pyrene	2.1	0.19	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/21/21 13:08	BGL
Benzo(b)fluoranthene	1.8	0.19	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/21/21 13:08	BGL
Benzo(g,h,i)perylene	1.2	0.19	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/21/21 13:08	BGL
Benzo(k)fluoranthene	0.61	0.19	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/21/21 13:08	BGL
Bis(2-chloroethoxy)methane	ND	0.38	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/21/21 13:08	BGL
Bis(2-chloroethyl)ether	ND	0.38	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/21/21 13:08	BGL
Bis(2-chloroisopropyl)ether	ND	0.38	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/21/21 13:08	BGL
Bis(2-Ethylhexyl)phthalate	ND	0.38	mg/Kg dry	1	V-06	SW-846 8270D-E	6/18/21	6/21/21 13:08	BGL
4-Bromophenylphenylether	ND	0.38	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/21/21 13:08	BGL
Butylbenzylphthalate	ND	0.38	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/21/21 13:08	BGL
4-Chloroaniline	ND	0.74	mg/Kg dry	1	V-34	SW-846 8270D-E	6/18/21	6/21/21 13:08	BGL
2-Chloronaphthalene	ND	0.38	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/21/21 13:08	BGL
2-Chlorophenol	ND	0.38	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/21/21 13:08	BGL
Chrysene	3.2	0.19	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/21/21 13:08	BGL
Dibenz(a,h)anthracene	0.36	0.19	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/21/21 13:08	BGL
Dibenzofuran	ND	0.38	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/21/21 13:08	BGL
Di-n-butylphthalate	ND	0.38	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/21/21 13:08	BGL
1,2-Dichlorobenzene	ND	0.38	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/21/21 13:08	BGL
1,3-Dichlorobenzene	ND	0.38	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/21/21 13:08	BGL
1,4-Dichlorobenzene	ND	0.38	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/21/21 13:08	BGL
3,3-Dichlorobenzidine	ND	0.19	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/21/21 13:08	BGL
2,4-Dichlorophenol	ND	0.38	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/21/21 13:08	BGL
Diethylphthalate	ND	0.38	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/21/21 13:08	BGL
2,4-Dimethylphenol	ND	0.38	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/21/21 13:08	BGL
Dimethylphthalate	ND	0.38	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/21/21 13:08	BGL
2,4-Dinitrophenol	ND	0.74	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/21/21 13:08	BGL
2,4-Dinitrotoluene	ND	0.38	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/21/21 13:08	BGL
2,6-Dinitrotoluene	ND	0.38	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/21/21 13:08	BGL
Di-n-octylphthalate	ND	0.38	mg/Kg dry	1	V-20	SW-846 8270D-E	6/18/21	6/21/21 13:08	BGL
1,2-Diphenylhydrazine/Azobenzene	ND	0.38	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/21/21 13:08	BGL
Fluoranthene	3.4	0.19	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/21/21 13:08	BGL
Fluorene	1.3	0.19	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/21/21 13:08	BGL
Hexachlorobenzene	ND	0.38	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/21/21 13:08	BGL
Hexachlorobutadiene	ND	0.38	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/21/21 13:08	BGL
Hexachloroethane	ND	0.38	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/21/21 13:08	BGL
Indeno(1,2,3-cd)pyrene	1.2	0.19	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/21/21 13:08	BGL
Isophorone	ND	0.38	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/21/21 13:08	BGL
2-Methylnaphthalene	1.8	0.19	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/21/21 13:08	BGL

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Project Location: Wayland, MA

Sample Description:

Work Order: 21F1036

Date Received: 6/17/2021

Field Sample #: V-302-20210617

Sampled: 6/17/2021 11:00

Sample ID: 21F1036-02

Sample Matrix: Soil

## Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	0.38	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/21/21 13:08	BGL
3/4-Methylphenol	ND	0.38	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/21/21 13:08	BGL
Naphthalene	1.1	0.19	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/21/21 13:08	BGL
Nitrobenzene	ND	0.38	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/21/21 13:08	BGL
2-Nitrophenol	ND	0.38	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/21/21 13:08	BGL
4-Nitrophenol	ND	0.74	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/21/21 13:08	BGL
Pentachlorophenol	ND	0.38	mg/Kg dry	1	V-05	SW-846 8270D-E	6/18/21	6/21/21 13:08	BGL
Phenanthrene	6.4	0.38	mg/Kg dry	2		SW-846 8270D-E	6/18/21	6/21/21 16:14	BGL
Phenol	ND	0.38	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/21/21 13:08	BGL
Pyrene	7.8	0.38	mg/Kg dry	2		SW-846 8270D-E	6/18/21	6/21/21 16:14	BGL
Pyridine	ND	0.38	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/21/21 13:08	BGL
1,2,4-Trichlorobenzene	ND	0.38	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/21/21 13:08	BGL
2,4,5-Trichlorophenol	ND	0.38	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/21/21 13:08	BGL
2,4,6-Trichlorophenol	ND	0.38	mg/Kg dry	1		SW-846 8270D-E	6/18/21	6/21/21 13:08	BGL

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	49.5	30-130	
2-Fluorophenol	51.2	30-130	
Phenol-d6	62.8	30-130	
Phenol-d6	64.8	30-130	
Nitrobenzene-d5	60.7	30-130	
Nitrobenzene-d5	61.7	30-130	
2-Fluorobiphenyl	53.1	30-130	
2-Fluorobiphenyl	56.9	30-130	
2,4,6-Tribromophenol	44.2	30-130	
2,4,6-Tribromophenol	46.0	30-130	
p-Terphenyl-d14	88.5	30-130	
p-Terphenyl-d14	95.4	30-130	

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Project Location: Wayland, MA

Sample Description:

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Field Sample #: V-302-20210617

Sampled: 6/17/2021 11:00

Sample ID: 21F1036-02

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.090	0.041	mg/Kg dry	4		SW-846 8082A	6/17/21	6/21/21 23:41	AYH
Aroclor-1221 [1]	ND	0.090	0.068	mg/Kg dry	4		SW-846 8082A	6/17/21	6/21/21 23:41	AYH
Aroclor-1232 [1]	ND	0.090	0.081	mg/Kg dry	4		SW-846 8082A	6/17/21	6/21/21 23:41	AYH
Aroclor-1242 [1]	ND	0.090	0.068	mg/Kg dry	4		SW-846 8082A	6/17/21	6/21/21 23:41	AYH
Aroclor-1248 [1]	ND	0.090	0.032	mg/Kg dry	4		SW-846 8082A	6/17/21	6/21/21 23:41	AYH
Aroclor-1254 [1]	ND	0.090	0.036	mg/Kg dry	4		SW-846 8082A	6/17/21	6/21/21 23:41	AYH
Aroclor-1260 [1]	ND	0.090	0.050	mg/Kg dry	4		SW-846 8082A	6/17/21	6/21/21 23:41	AYH
Aroclor-1262 [1]	ND	0.090	0.045	mg/Kg dry	4		SW-846 8082A	6/17/21	6/21/21 23:41	AYH
Aroclor-1268 [1]	ND	0.090	0.072	mg/Kg dry	4		SW-846 8082A	6/17/21	6/21/21 23:41	AYH
Surrogates		% Recovery	Recovery Limits			Flag/Qual				
Decachlorobiphenyl [1]		68.5	30-150						6/21/21 23:41	
Decachlorobiphenyl [2]		76.2	30-150						6/21/21 23:41	
Tetrachloro-m-xylene [1]		76.3	30-150						6/21/21 23:41	
Tetrachloro-m-xylene [2]		80.2	30-150						6/21/21 23:41	

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Project Location: Wayland, MA

Sample Description:

Work Order: 21F1036

Date Received: 6/17/2021

Field Sample #: V-302-20210617

Sampled: 6/17/2021 11:00

Sample ID: 21F1036-02

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses - EPH**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	56	mg/Kg dry	5		MADEP EPH rev 2.1	6/17/21	6/22/21 11:51	AYH
C19-C36 Aliphatics	130	56	mg/Kg dry	5		MADEP EPH rev 2.1	6/17/21	6/22/21 11:51	AYH
Unadjusted C11-C22 Aromatics	180	56	mg/Kg dry	5		MADEP EPH rev 2.1	6/17/21	6/22/21 11:51	AYH
C11-C22 Aromatics	170	56	mg/Kg dry	5		MADEP EPH rev 2.1	6/17/21	6/22/21 11:51	AYH
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
Chlorooctadecane (COD)	61.9		40-140				6/22/21 11:51		
o-Terphenyl (OTP)	62.0		40-140				6/22/21 11:51		
2-Bromonaphthalene	79.6		40-140				6/22/21 11:51		
2-Fluorobiphenyl	78.3		40-140				6/22/21 11:51		

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Project Location: Wayland, MA

Sample Description:

Work Order: 21F1036

Date Received: 6/17/2021

Field Sample #: V-302-20210617

Sampled: 6/17/2021 11:00

Sample ID: 21F1036-02

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.8	mg/Kg dry	1		SW-846 6010D	6/18/21	6/21/21 14:11	AJL
Arsenic	8.2	3.7	mg/Kg dry	1		SW-846 6010D	6/22/21	6/22/21 16:16	MJH
Barium	33	1.8	mg/Kg dry	1		SW-846 6010D	6/18/21	6/18/21 19:17	AJL
Beryllium	0.30	0.18	mg/Kg dry	1		SW-846 6010D	6/18/21	6/18/21 19:17	AJL
Cadmium	ND	0.37	mg/Kg dry	1		SW-846 6010D	6/18/21	6/18/21 19:17	AJL
Chromium	14	0.74	mg/Kg dry	1		SW-846 6010D	6/18/21	6/18/21 19:17	AJL
Lead	22	0.56	mg/Kg dry	1		SW-846 6010D	6/22/21	6/22/21 16:16	MJH
Mercury	ND	0.028	mg/Kg dry	1		SW-846 7471B	6/21/21	6/22/21 11:41	CJV
Nickel	11	0.74	mg/Kg dry	1		SW-846 6010D	6/18/21	6/18/21 19:17	AJL
Selenium	ND	3.7	mg/Kg dry	1		SW-846 6010D	6/18/21	6/21/21 14:11	AJL
Silver	ND	0.37	mg/Kg dry	1		SW-846 6010D	6/22/21	6/22/21 16:16	MJH
Thallium	ND	1.8	mg/Kg dry	1		SW-846 6010D	6/18/21	6/18/21 19:17	AJL
Vanadium	21	0.74	mg/Kg dry	1		SW-846 6010D	6/18/21	6/18/21 19:17	AJL
Zinc	55	0.74	mg/Kg dry	1		SW-846 6010D	6/18/21	6/18/21 19:17	AJL

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Project Location: Wayland, MA

Sample Description:

Work Order: 21F1036

Date Received: 6/17/2021

Field Sample #: V-302-20210617

Sampled: 6/17/2021 11:00

Sample ID: 21F1036-02

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	88.8		% Wt	1		SM 2540G	6/18/21	6/19/21 8:28	JML
Ignitability	Absent		present/absent	1		SW-846 1030	6/18/21	6/18/21 17:05	DJM
pH @17.7°C	7.9		pH Units	1		SW-846 9045C	6/17/21	6/17/21 20:40	CB2
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	6/18/21	6/20/21 15:35	YR
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	6/18/21	6/20/21 14:27	YR
Specific conductance	7.5	2.0	µmhos/cm	1		SM21-22 2510B Modified	6/18/21	6/18/21 15:00	EC

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**Sample Extraction Data**
**Prep Method: SW-846 3546 Analytical Method: MADEP EPH rev 2.1**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
21F1036-01 [V-301-SP-20210617]	B284242	20.0	2.00	06/17/21
21F1036-02 [V-302-20210617]	B284242	20.0	2.00	06/17/21

**Prep Method: % Solids Analytical Method: SM 2540G**

Lab Number [Field ID]	Batch	Date
21F1036-01 [V-301-SP-20210617]	B284313	06/18/21
21F1036-02 [V-302-20210617]	B284313	06/18/21

**SM21-22 2510B Modified**

Lab Number [Field ID]	Batch	Initial [g]	Date
21F1036-01 [V-301-SP-20210617]	B284299	1.00	06/18/21
21F1036-02 [V-302-20210617]	B284299	1.00	06/18/21

**SW-846 1030**

Lab Number [Field ID]	Batch	Initial [g]	Date
21F1036-01 [V-301-SP-20210617]	B284331	50.0	06/18/21
21F1036-02 [V-302-20210617]	B284331	50.0	06/18/21

**Prep Method: SW-846 3050B Analytical Method: SW-846 6010D**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
21F1036-01 [V-301-SP-20210617]	B284271	1.52	50.0	06/18/21
21F1036-02 [V-302-20210617]	B284271	1.53	50.0	06/18/21

**Prep Method: SW-846 3051 Analytical Method: SW-846 6010D**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
21F1036-01RE1 [V-301-SP-20210617]	B284524	1.50	50.0	06/22/21
21F1036-02RE1 [V-302-20210617]	B284524	1.51	50.0	06/22/21

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
21F1036-01 [V-301-SP-20210617]	B284383	0.606	50.0	06/21/21
21F1036-02 [V-302-20210617]	B284383	0.602	50.0	06/21/21

**Prep Method: SW-846 3540C Analytical Method: SW-846 8082A**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
21F1036-01 [V-301-SP-20210617]	B284180	10.0	10.0	06/17/21
21F1036-02 [V-302-20210617]	B284180	10.0	10.0	06/17/21



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**Sample Extraction Data**
**Prep Method: SW-846 5035    Analytical Method: SW-846 8260C-D**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
21F1036-01 [V-301-SP-20210617]	B284263	5.67	10.0	06/18/21
21F1036-02 [V-302-20210617]	B284263	6.37	10.0	06/18/21

**Prep Method: SW-846 3546    Analytical Method: SW-846 8270D-E**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
21F1036-01 [V-301-SP-20210617]	B284265	30.3	1.00	06/18/21
21F1036-02 [V-302-20210617]	B284265	30.3	1.00	06/18/21
21F1036-02RE1 [V-302-20210617]	B284265	30.3	1.00	06/18/21

**SW-846 9014**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
21F1036-01 [V-301-SP-20210617]	B284300	25.4	250	06/18/21
21F1036-02 [V-302-20210617]	B284300	25.5	250	06/18/21

**SW-846 9030A**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
21F1036-01 [V-301-SP-20210617]	B284302	25.4	250	06/18/21
21F1036-02 [V-302-20210617]	B284302	25.5	250	06/18/21

**SW-846 9045C**

Lab Number [Field ID]	Batch	Initial [g]	Date
21F1036-01 [V-301-SP-20210617]	B284239	20.0	06/17/21
21F1036-02 [V-302-20210617]	B284239	20.0	06/17/21

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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
<b>Batch B284263 - SW-846 5035</b>										
<b>Blank (B284263-BLK1)</b>										
Prepared & Analyzed: 06/18/21										
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							
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							
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							
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
<b>Batch B284263 - SW-846 5035</b>										
<b>Blank (B284263-BLK1)</b>										
Prepared & Analyzed: 06/18/21										
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	0.0558		mg/Kg wet	0.0500		112	70-130			
Surrogate: Toluene-d8	0.0485		mg/Kg wet	0.0500		97.1	70-130			
Surrogate: 4-Bromofluorobenzene	0.0483		mg/Kg wet	0.0500		96.5	70-130			
<b>LCS (B284263-BS1)</b>										
Prepared & Analyzed: 06/18/21										
Acetone	0.208	0.10	mg/Kg wet	0.200		104	40-160			†
tert-Amyl Methyl Ether (TAME)	0.0179	0.0010	mg/Kg wet	0.0200		89.3	70-130			
Benzene	0.0185	0.0020	mg/Kg wet	0.0200		92.6	70-130			
Bromobenzene	0.0186	0.0020	mg/Kg wet	0.0200		92.8	70-130			
Bromochloromethane	0.0196	0.0020	mg/Kg wet	0.0200		97.8	70-130			
Bromodichloromethane	0.0214	0.0020	mg/Kg wet	0.0200		107	70-130			
Bromoform	0.0205	0.0020	mg/Kg wet	0.0200		102	70-130			
Bromomethane	0.0203	0.010	mg/Kg wet	0.0200		102	40-160			V-34 †
2-Butanone (MEK)	0.189	0.040	mg/Kg wet	0.200		94.7	40-160			†
n-Butylbenzene	0.0172	0.0020	mg/Kg wet	0.0200		85.8	70-130			
sec-Butylbenzene	0.0169	0.0020	mg/Kg wet	0.0200		84.7	70-130			
tert-Butylbenzene	0.0179	0.0020	mg/Kg wet	0.0200		89.5	70-130			
tert-Butyl Ethyl Ether (TBEE)	0.0184	0.0010	mg/Kg wet	0.0200		91.9	70-130			
Carbon Disulfide	0.192	0.0060	mg/Kg wet	0.200		95.9	70-130			
Carbon Tetrachloride	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130			
Chlorobenzene	0.0187	0.0020	mg/Kg wet	0.0200		93.4	70-130			
Chlorodibromomethane	0.0210	0.0010	mg/Kg wet	0.0200		105	70-130			
Chloroethane	0.0195	0.010	mg/Kg wet	0.0200		97.5	70-130			
Chloroform	0.0208	0.0040	mg/Kg wet	0.0200		104	70-130			
Chloromethane	0.0191	0.010	mg/Kg wet	0.0200		95.4	40-160			†
2-Chlorotoluene	0.0190	0.0020	mg/Kg wet	0.0200		94.8	70-130			
4-Chlorotoluene	0.0185	0.0020	mg/Kg wet	0.0200		92.7	70-130			
1,2-Dibromo-3-chloropropane (DBCP)	0.0200	0.0020	mg/Kg wet	0.0200		99.8	70-130			
1,2-Dibromoethane (EDB)	0.0196	0.0010	mg/Kg wet	0.0200		98.2	70-130			
Dibromomethane	0.0208	0.0020	mg/Kg wet	0.0200		104	70-130			
1,2-Dichlorobenzene	0.0180	0.0020	mg/Kg wet	0.0200		90.2	70-130			
1,3-Dichlorobenzene	0.0176	0.0020	mg/Kg wet	0.0200		88.1	70-130			
1,4-Dichlorobenzene	0.0170	0.0020	mg/Kg wet	0.0200		85.0	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
<b>Batch B284263 - SW-846 5035</b>										
<b>LCS (B284263-BS1)</b>										
Prepared & Analyzed: 06/18/21										
Dichlorodifluoromethane (Freon 12)	0.0139	0.010	mg/Kg wet	0.0200		69.4	40-160			L-14, V-05 †
1,1-Dichloroethane	0.0218	0.0020	mg/Kg wet	0.0200		109	70-130			V-20
1,2-Dichloroethane	0.0233	0.0020	mg/Kg wet	0.0200		117	70-130			V-20
1,1-Dichloroethylene	0.0222	0.0040	mg/Kg wet	0.0200		111	70-130			V-20
cis-1,2-Dichloroethylene	0.0198	0.0020	mg/Kg wet	0.0200		98.8	70-130			
trans-1,2-Dichloroethylene	0.0207	0.0020	mg/Kg wet	0.0200		103	70-130			
1,2-Dichloropropane	0.0212	0.0020	mg/Kg wet	0.0200		106	70-130			
1,3-Dichloropropane	0.0209	0.0010	mg/Kg wet	0.0200		104	70-130			
2,2-Dichloropropane	0.0186	0.0020	mg/Kg wet	0.0200		93.2	70-130			
1,1-Dichloropropene	0.0201	0.0020	mg/Kg wet	0.0200		101	70-130			
cis-1,3-Dichloropropene	0.0185	0.0010	mg/Kg wet	0.0200		92.7	70-130			
trans-1,3-Dichloropropene	0.0193	0.0010	mg/Kg wet	0.0200		96.3	70-130			
Diethyl Ether	0.0194	0.010	mg/Kg wet	0.0200		96.8	70-130			
Diisopropyl Ether (DIPE)	0.0199	0.0010	mg/Kg wet	0.0200		99.6	70-130			
1,4-Dioxane	0.187	0.10	mg/Kg wet	0.200		93.7	40-160			†
Ethylbenzene	0.0181	0.0020	mg/Kg wet	0.0200		90.6	70-130			
Hexachlorobutadiene	0.0185	0.0020	mg/Kg wet	0.0200		92.7	70-130			
2-Hexanone (MBK)	0.181	0.020	mg/Kg wet	0.200		90.4	40-160			†
Isopropylbenzene (Cumene)	0.0175	0.0020	mg/Kg wet	0.0200		87.4	70-130			
p-Isopropyltoluene (p-Cymene)	0.0175	0.0020	mg/Kg wet	0.0200		87.3	70-130			
Methyl tert-Butyl Ether (MTBE)	0.0192	0.0040	mg/Kg wet	0.0200		96.0	70-130			
Methylene Chloride	0.0220	0.010	mg/Kg wet	0.0200		110	70-130			V-20
4-Methyl-2-pentanone (MIBK)	0.196	0.020	mg/Kg wet	0.200		97.9	40-160			†
Naphthalene	0.0164	0.0040	mg/Kg wet	0.0200		81.8	70-130			
n-Propylbenzene	0.0180	0.0020	mg/Kg wet	0.0200		89.8	70-130			
Styrene	0.0179	0.0020	mg/Kg wet	0.0200		89.5	70-130			
1,1,1,2-Tetrachloroethane	0.0197	0.0020	mg/Kg wet	0.0200		98.5	70-130			
1,1,2,2-Tetrachloroethane	0.0184	0.0010	mg/Kg wet	0.0200		92.2	70-130			
Tetrachloroethylene	0.0196	0.0020	mg/Kg wet	0.0200		98.2	70-130			
Tetrahydrofuran	0.0176	0.010	mg/Kg wet	0.0200		88.1	70-130			
Toluene	0.0197	0.0020	mg/Kg wet	0.0200		98.5	70-130			
1,2,3-Trichlorobenzene	0.0177	0.0020	mg/Kg wet	0.0200		88.4	70-130			
1,2,4-Trichlorobenzene	0.0168	0.0020	mg/Kg wet	0.0200		83.8	70-130			
1,1,1-Trichloroethane	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130			
1,1,2-Trichloroethane	0.0198	0.0020	mg/Kg wet	0.0200		99.2	70-130			
Trichloroethylene	0.0196	0.0020	mg/Kg wet	0.0200		98.0	70-130			
Trichlorofluoromethane (Freon 11)	0.0206	0.010	mg/Kg wet	0.0200		103	70-130			
1,2,3-Trichloropropane	0.0189	0.0020	mg/Kg wet	0.0200		94.7	70-130			
1,2,4-Trimethylbenzene	0.0173	0.0020	mg/Kg wet	0.0200		86.7	70-130			
1,3,5-Trimethylbenzene	0.0181	0.0020	mg/Kg wet	0.0200		90.4	70-130			
Vinyl Chloride	0.0195	0.010	mg/Kg wet	0.0200		97.3	70-130			
m+p Xylene	0.0371	0.0040	mg/Kg wet	0.0400		92.7	70-130			
o-Xylene	0.0184	0.0020	mg/Kg wet	0.0200		92.0	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0532		mg/Kg wet	0.0500		106	70-130			
Surrogate: Toluene-d8	0.0498		mg/Kg wet	0.0500		99.6	70-130			
Surrogate: 4-Bromofluorobenzene	0.0502		mg/Kg wet	0.0500		100	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
<b>Batch B284263 - SW-846 5035</b>										
<b>LCS Dup (B284263-BSD1)</b>										
Prepared & Analyzed: 06/18/21										
Acetone	0.185	0.10	mg/Kg wet	0.200		92.3	40-160	12.0	20	†
tert-Amyl Methyl Ether (TAME)	0.0163	0.0010	mg/Kg wet	0.0200		81.3	70-130	9.39	20	
Benzene	0.0167	0.0020	mg/Kg wet	0.0200		83.4	70-130	10.4	20	
Bromobenzene	0.0169	0.0020	mg/Kg wet	0.0200		84.6	70-130	9.27	20	
Bromochloromethane	0.0177	0.0020	mg/Kg wet	0.0200		88.3	70-130	10.1	20	
Bromodichloromethane	0.0196	0.0020	mg/Kg wet	0.0200		97.8	70-130	9.05	20	
Bromoform	0.0179	0.0020	mg/Kg wet	0.0200		89.5	70-130	13.5	20	
Bromomethane	0.0185	0.010	mg/Kg wet	0.0200		92.7	40-160	9.33	20	V-34 †
2-Butanone (MEK)	0.172	0.040	mg/Kg wet	0.200		85.8	40-160	9.80	20	†
n-Butylbenzene	0.0155	0.0020	mg/Kg wet	0.0200		77.6	70-130	10.1	20	
sec-Butylbenzene	0.0155	0.0020	mg/Kg wet	0.0200		77.3	70-130	9.08	20	
tert-Butylbenzene	0.0158	0.0020	mg/Kg wet	0.0200		79.1	70-130	12.3	20	
tert-Butyl Ethyl Ether (TBEE)	0.0170	0.0010	mg/Kg wet	0.0200		85.1	70-130	7.69	20	
Carbon Disulfide	0.173	0.0060	mg/Kg wet	0.200		86.4	70-130	10.5	20	
Carbon Tetrachloride	0.0183	0.0020	mg/Kg wet	0.0200		91.4	70-130	10.1	20	
Chlorobenzene	0.0170	0.0020	mg/Kg wet	0.0200		85.2	70-130	9.21	20	
Chlorodibromomethane	0.0200	0.0010	mg/Kg wet	0.0200		100	70-130	4.59	20	
Chloroethane	0.0181	0.010	mg/Kg wet	0.0200		90.6	70-130	7.37	20	
Chloroform	0.0186	0.0040	mg/Kg wet	0.0200		92.9	70-130	11.2	20	
Chloromethane	0.0173	0.010	mg/Kg wet	0.0200		86.4	40-160	9.88	20	†
2-Chlorotoluene	0.0170	0.0020	mg/Kg wet	0.0200		84.9	70-130	11.1	20	
4-Chlorotoluene	0.0170	0.0020	mg/Kg wet	0.0200		85.2	70-130	8.41	20	
1,2-Dibromo-3-chloropropane (DBCP)	0.0168	0.0020	mg/Kg wet	0.0200		84.2	70-130	17.0	20	
1,2-Dibromoethane (EDB)	0.0182	0.0010	mg/Kg wet	0.0200		90.9	70-130	7.74	20	
Dibromomethane	0.0186	0.0020	mg/Kg wet	0.0200		92.9	70-130	11.1	20	
1,2-Dichlorobenzene	0.0165	0.0020	mg/Kg wet	0.0200		82.5	70-130	8.92	20	
1,3-Dichlorobenzene	0.0156	0.0020	mg/Kg wet	0.0200		77.9	70-130	12.2	20	
1,4-Dichlorobenzene	0.0157	0.0020	mg/Kg wet	0.0200		78.5	70-130	7.94	20	
Dichlorodifluoromethane (Freon 12)	0.0124	0.010	mg/Kg wet	0.0200		61.9	40-160	11.4	20	L-14, V-05 †
1,1-Dichloroethane	0.0194	0.0020	mg/Kg wet	0.0200		96.8	70-130	12.0	20	V-20
1,2-Dichloroethane	0.0218	0.0020	mg/Kg wet	0.0200		109	70-130	6.81	20	V-20
1,1-Dichloroethylene	0.0198	0.0040	mg/Kg wet	0.0200		99.2	70-130	11.5	20	V-20
cis-1,2-Dichloroethylene	0.0179	0.0020	mg/Kg wet	0.0200		89.5	70-130	9.89	20	
trans-1,2-Dichloroethylene	0.0188	0.0020	mg/Kg wet	0.0200		94.0	70-130	9.65	20	
1,2-Dichloropropane	0.0188	0.0020	mg/Kg wet	0.0200		94.2	70-130	11.7	20	
1,3-Dichloropropane	0.0192	0.0010	mg/Kg wet	0.0200		95.8	70-130	8.54	20	
2,2-Dichloropropane	0.0173	0.0020	mg/Kg wet	0.0200		86.4	70-130	7.53	20	
1,1-Dichloropropene	0.0180	0.0020	mg/Kg wet	0.0200		90.1	70-130	11.0	20	
cis-1,3-Dichloropropene	0.0174	0.0010	mg/Kg wet	0.0200		87.0	70-130	6.41	20	
trans-1,3-Dichloropropene	0.0176	0.0010	mg/Kg wet	0.0200		88.0	70-130	9.05	20	
Diethyl Ether	0.0176	0.010	mg/Kg wet	0.0200		88.2	70-130	9.34	20	
Diisopropyl Ether (DIPE)	0.0184	0.0010	mg/Kg wet	0.0200		92.0	70-130	7.92	20	
1,4-Dioxane	0.180	0.10	mg/Kg wet	0.200		89.9	40-160	4.12	20	†
Ethylbenzene	0.0165	0.0020	mg/Kg wet	0.0200		82.4	70-130	9.48	20	
Hexachlorobutadiene	0.0163	0.0020	mg/Kg wet	0.0200		81.3	70-130	13.1	20	
2-Hexanone (MBK)	0.168	0.020	mg/Kg wet	0.200		83.8	40-160	7.56	20	†
Isopropylbenzene (Cumene)	0.0161	0.0020	mg/Kg wet	0.0200		80.4	70-130	8.30	20	
p-Isopropyltoluene (p-Cymene)	0.0155	0.0020	mg/Kg wet	0.0200		77.3	70-130	12.1	20	
Methyl tert-Butyl Ether (MTBE)	0.0171	0.0040	mg/Kg wet	0.0200		85.6	70-130	11.4	20	
Methylene Chloride	0.0198	0.010	mg/Kg wet	0.0200		99.2	70-130	10.6	20	V-20
4-Methyl-2-pentanone (MIBK)	0.177	0.020	mg/Kg wet	0.200		88.5	40-160	10.2	20	†
Naphthalene	0.0148	0.0040	mg/Kg wet	0.0200		73.8	70-130	10.2	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
<b>Batch B284263 - SW-846 5035</b>										
<b>LCS Dup (B284263-BSD1)</b>										
Prepared & Analyzed: 06/18/21										
n-Propylbenzene	0.0163	0.0020	mg/Kg wet	0.0200		81.4	70-130	9.87	20	
Styrene	0.0163	0.0020	mg/Kg wet	0.0200		81.7	70-130	9.14	20	
1,1,1,2-Tetrachloroethane	0.0185	0.0020	mg/Kg wet	0.0200		92.6	70-130	6.24	20	
1,1,2,2-Tetrachloroethane	0.0164	0.0010	mg/Kg wet	0.0200		81.8	70-130	11.9	20	
Tetrachloroethylene	0.0179	0.0020	mg/Kg wet	0.0200		89.4	70-130	9.47	20	
Tetrahydrofuran	0.0150	0.010	mg/Kg wet	0.0200		74.8	70-130	16.4	20	
Toluene	0.0183	0.0020	mg/Kg wet	0.0200		91.6	70-130	7.26	20	
1,2,3-Trichlorobenzene	0.0157	0.0020	mg/Kg wet	0.0200		78.6	70-130	11.7	20	
1,2,4-Trichlorobenzene	0.0147	0.0020	mg/Kg wet	0.0200		73.7	70-130	12.8	20	
1,1,1-Trichloroethane	0.0184	0.0020	mg/Kg wet	0.0200		91.9	70-130	9.25	20	
1,1,2-Trichloroethane	0.0190	0.0020	mg/Kg wet	0.0200		94.9	70-130	4.43	20	
Trichloroethylene	0.0182	0.0020	mg/Kg wet	0.0200		91.2	70-130	7.19	20	
Trichlorofluoromethane (Freon 11)	0.0188	0.010	mg/Kg wet	0.0200		94.1	70-130	9.01	20	
1,2,3-Trichloropropane	0.0180	0.0020	mg/Kg wet	0.0200		90.2	70-130	4.87	20	
1,2,4-Trimethylbenzene	0.0155	0.0020	mg/Kg wet	0.0200		77.4	70-130	11.3	20	
1,3,5-Trimethylbenzene	0.0163	0.0020	mg/Kg wet	0.0200		81.3	70-130	10.6	20	
Vinyl Chloride	0.0176	0.010	mg/Kg wet	0.0200		87.8	70-130	10.3	20	
m+p Xylene	0.0339	0.0040	mg/Kg wet	0.0400		84.7	70-130	8.96	20	
o-Xylene	0.0168	0.0020	mg/Kg wet	0.0200		83.8	70-130	9.28	20	
Surrogate: 1,2-Dichloroethane-d4	0.0526		mg/Kg wet	0.0500		105	70-130			
Surrogate: Toluene-d8	0.0507		mg/Kg wet	0.0500		101	70-130			
Surrogate: 4-Bromofluorobenzene	0.0497		mg/Kg wet	0.0500		99.4	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
<b>Batch B284265 - SW-846 3546</b>										
<b>Blank (B284265-BLK1)</b>										
Prepared: 06/18/21 Analyzed: 06/19/21										
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							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							
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							
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							
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							
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							
2,4-Dinitrophenol	ND	0.66	mg/Kg wet							
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							
1,2-Diphenylhydrazine/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							V-05
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
<b>Batch B284265 - SW-846 3546</b>										
<b>Blank (B284265-BLK1)</b>										
					Prepared: 06/18/21 Analyzed: 06/19/21					
Phenol	ND	0.34	mg/Kg wet							
Pyrene	ND	0.17	mg/Kg wet							
Pyridine	ND	0.34	mg/Kg wet							
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	4.51		mg/Kg wet	6.62		68.1	30-130			
Surrogate: Phenol-d6	6.08		mg/Kg wet	6.62		91.8	30-130			
Surrogate: Nitrobenzene-d5	2.77		mg/Kg wet	3.31		83.6	30-130			
Surrogate: 2-Fluorobiphenyl	2.69		mg/Kg wet	3.31		81.2	30-130			
Surrogate: 2,4,6-Tribromophenol	5.31		mg/Kg wet	6.62		80.2	30-130			
Surrogate: p-Terphenyl-d14	3.62		mg/Kg wet	3.31		109	30-130			
<b>LCS (B284265-BS1)</b>										
					Prepared: 06/18/21 Analyzed: 06/19/21					
Acenaphthene	1.35	0.17	mg/Kg wet	1.66		81.5	40-140			
Acenaphthylene	1.32	0.17	mg/Kg wet	1.66		80.0	40-140			
Acetophenone	1.31	0.34	mg/Kg wet	1.66		78.9	40-140			
Aniline	1.24	0.34	mg/Kg wet	1.66		74.8	40-140			V-34
Anthracene	1.40	0.17	mg/Kg wet	1.66		84.5	40-140			
Benzo(a)anthracene	1.49	0.17	mg/Kg wet	1.66		90.0	40-140			
Benzo(a)pyrene	1.38	0.17	mg/Kg wet	1.66		83.2	40-140			
Benzo(b)fluoranthene	1.43	0.17	mg/Kg wet	1.66		86.3	40-140			
Benzo(g,h,i)perylene	1.29	0.17	mg/Kg wet	1.66		78.1	40-140			
Benzo(k)fluoranthene	1.39	0.17	mg/Kg wet	1.66		83.9	40-140			
Bis(2-chloroethoxy)methane	1.22	0.34	mg/Kg wet	1.66		73.7	40-140			
Bis(2-chloroethyl)ether	1.11	0.34	mg/Kg wet	1.66		66.9	40-140			
Bis(2-chloroisopropyl)ether	1.14	0.34	mg/Kg wet	1.66		69.1	40-140			
Bis(2-Ethylhexyl)phthalate	1.36	0.34	mg/Kg wet	1.66		82.4	40-140			
4-Bromophenylphenylether	1.23	0.34	mg/Kg wet	1.66		74.0	40-140			
Butylbenzylphthalate	1.42	0.34	mg/Kg wet	1.66		86.0	40-140			
4-Chloroaniline	1.19	0.66	mg/Kg wet	1.66		72.1	15-140			V-34 †
2-Chloronaphthalene	1.17	0.34	mg/Kg wet	1.66		70.9	40-140			
2-Chlorophenol	1.20	0.34	mg/Kg wet	1.66		72.7	30-130			
Chrysene	1.42	0.17	mg/Kg wet	1.66		86.0	40-140			
Dibenz(a,h)anthracene	1.36	0.17	mg/Kg wet	1.66		82.4	40-140			
Dibenzofuran	1.38	0.34	mg/Kg wet	1.66		83.2	40-140			
Di-n-butylphthalate	1.35	0.34	mg/Kg wet	1.66		81.8	40-140			
1,2-Dichlorobenzene	1.13	0.34	mg/Kg wet	1.66		68.3	40-140			
1,3-Dichlorobenzene	1.09	0.34	mg/Kg wet	1.66		66.1	40-140			
1,4-Dichlorobenzene	1.10	0.34	mg/Kg wet	1.66		66.6	40-140			
3,3-Dichlorobenzidine	1.60	0.17	mg/Kg wet	1.66		96.4	40-140			
2,4-Dichlorophenol	1.35	0.34	mg/Kg wet	1.66		81.7	30-130			
Diethylphthalate	1.36	0.34	mg/Kg wet	1.66		82.2	40-140			
2,4-Dimethylphenol	1.31	0.34	mg/Kg wet	1.66		79.0	30-130			
Dimethylphthalate	1.38	0.34	mg/Kg wet	1.66		83.2	40-140			
2,4-Dinitrophenol	1.43	0.66	mg/Kg wet	1.66		86.2	15-140			†
2,4-Dinitrotoluene	1.53	0.34	mg/Kg wet	1.66		92.4	40-140			
2,6-Dinitrotoluene	1.54	0.34	mg/Kg wet	1.66		92.7	40-140			
Di-n-octylphthalate	1.35	0.34	mg/Kg wet	1.66		81.4	40-140			
1,2-Diphenylhydrazine/Azobenzene	1.32	0.34	mg/Kg wet	1.66		79.6	40-140			
Fluoranthene	1.51	0.17	mg/Kg wet	1.66		91.0	40-140			
Fluorene	1.36	0.17	mg/Kg wet	1.66		82.3	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
<b>Batch B284265 - SW-846 3546</b>										
<b>LCS (B284265-BS1)</b>										
					Prepared: 06/18/21 Analyzed: 06/19/21					
Hexachlorobenzene	1.20	0.34	mg/Kg wet	1.66		72.2	40-140			
Hexachlorobutadiene	1.22	0.34	mg/Kg wet	1.66		74.0	40-140			
Hexachloroethane	1.10	0.34	mg/Kg wet	1.66		66.4	40-140			
Indeno(1,2,3-cd)pyrene	1.40	0.17	mg/Kg wet	1.66		84.4	40-140			
Isophorone	1.42	0.34	mg/Kg wet	1.66		86.0	40-140			
2-Methylnaphthalene	1.36	0.17	mg/Kg wet	1.66		82.3	40-140			
2-Methylphenol	1.25	0.34	mg/Kg wet	1.66		75.6	30-130			
3/4-Methylphenol	1.32	0.34	mg/Kg wet	1.66		79.5	30-130			
Naphthalene	1.18	0.17	mg/Kg wet	1.66		71.3	40-140			
Nitrobenzene	1.30	0.34	mg/Kg wet	1.66		78.7	40-140			
2-Nitrophenol	1.34	0.34	mg/Kg wet	1.66		81.2	30-130			
4-Nitrophenol	1.65	0.66	mg/Kg wet	1.66		99.5	15-140			†
Pentachlorophenol	0.935	0.34	mg/Kg wet	1.66		56.5	30-130			V-05
Phenanthrene	1.39	0.17	mg/Kg wet	1.66		83.9	40-140			
Phenol	1.29	0.34	mg/Kg wet	1.66		78.0	15-140			†
Pyrene	1.45	0.17	mg/Kg wet	1.66		87.6	40-140			
Pyridine	0.857	0.34	mg/Kg wet	1.66		51.8	30-140			†
1,2,4-Trichlorobenzene	1.19	0.34	mg/Kg wet	1.66		72.1	40-140			
2,4,5-Trichlorophenol	1.53	0.34	mg/Kg wet	1.66		92.5	30-130			
2,4,6-Trichlorophenol	1.47	0.34	mg/Kg wet	1.66		88.9	30-130			
Surrogate: 2-Fluorophenol	4.40		mg/Kg wet	6.62		66.4	30-130			
Surrogate: Phenol-d6	5.99		mg/Kg wet	6.62		90.4	30-130			
Surrogate: Nitrobenzene-d5	2.79		mg/Kg wet	3.31		84.3	30-130			
Surrogate: 2-Fluorobiphenyl	2.66		mg/Kg wet	3.31		80.3	30-130			
Surrogate: 2,4,6-Tribromophenol	5.37		mg/Kg wet	6.62		81.0	30-130			
Surrogate: p-Terphenyl-d14	3.66		mg/Kg wet	3.31		110	30-130			
<b>LCS Dup (B284265-BS1)</b>										
					Prepared: 06/18/21 Analyzed: 06/19/21					
Acenaphthene	1.30	0.17	mg/Kg wet	1.65		78.7	40-140	3.85	30	
Acenaphthylene	1.26	0.17	mg/Kg wet	1.65		76.3	40-140	5.04	30	
Acetophenone	1.19	0.34	mg/Kg wet	1.65		72.4	40-140	9.00	30	
Aniline	1.04	0.34	mg/Kg wet	1.65		62.9	40-140	17.5	30	V-34
Anthracene	1.33	0.17	mg/Kg wet	1.65		80.7	40-140	4.93	30	
Benzo(a)anthracene	1.40	0.17	mg/Kg wet	1.65		84.7	40-140	6.35	30	
Benzo(a)pyrene	1.29	0.17	mg/Kg wet	1.65		78.2	40-140	6.52	30	
Benzo(b)fluoranthene	1.36	0.17	mg/Kg wet	1.65		82.5	40-140	4.90	30	
Benzo(g,h,i)perylene	1.20	0.17	mg/Kg wet	1.65		72.5	40-140	7.87	30	
Benzo(k)fluoranthene	1.28	0.17	mg/Kg wet	1.65		77.3	40-140	8.54	30	
Bis(2-chloroethoxy)methane	1.13	0.34	mg/Kg wet	1.65		68.7	40-140	7.35	30	
Bis(2-chloroethyl)ether	0.971	0.34	mg/Kg wet	1.65		58.8	40-140	13.2	30	
Bis(2-chloroisopropyl)ether	1.01	0.34	mg/Kg wet	1.65		61.3	40-140	12.3	30	
Bis(2-Ethylhexyl)phthalate	1.25	0.34	mg/Kg wet	1.65		75.5	40-140	9.12	30	
4-Bromophenylphenylether	1.16	0.34	mg/Kg wet	1.65		70.2	40-140	5.60	30	
Butylbenzylphthalate	1.30	0.34	mg/Kg wet	1.65		79.0	40-140	8.79	30	
4-Chloroaniline	1.14	0.65	mg/Kg wet	1.65		69.1	15-140	4.55	30	V-34 †
2-Chloronaphthalene	1.11	0.34	mg/Kg wet	1.65		67.5	40-140	5.24	30	
2-Chlorophenol	1.10	0.34	mg/Kg wet	1.65		66.4	30-130	9.36	30	
Chrysene	1.36	0.17	mg/Kg wet	1.65		82.4	40-140	4.60	30	
Dibenz(a,h)anthracene	1.29	0.17	mg/Kg wet	1.65		78.2	40-140	5.51	30	
Dibenzofuran	1.33	0.34	mg/Kg wet	1.65		80.3	40-140	3.83	30	
Di-n-butylphthalate	1.25	0.34	mg/Kg wet	1.65		75.9	40-140	7.84	30	
1,2-Dichlorobenzene	1.06	0.34	mg/Kg wet	1.65		64.2	40-140	6.46	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
<b>Batch B284265 - SW-846 3546</b>										
<b>LCS Dup (B284265-BSD1)</b>										
					Prepared: 06/18/21 Analyzed: 06/19/21					
1,3-Dichlorobenzene	1.00	0.34	mg/Kg wet	1.65		60.8	40-140	8.75	30	
1,4-Dichlorobenzene	1.04	0.34	mg/Kg wet	1.65		62.8	40-140	6.08	30	
3,3-Dichlorobenzidine	1.44	0.17	mg/Kg wet	1.65		87.1	40-140	10.5	30	
2,4-Dichlorophenol	1.32	0.34	mg/Kg wet	1.65		80.3	30-130	2.13	30	
Diethylphthalate	1.26	0.34	mg/Kg wet	1.65		76.4	40-140	7.59	30	
2,4-Dimethylphenol	1.25	0.34	mg/Kg wet	1.65		75.6	30-130	4.78	30	
Dimethylphthalate	1.31	0.34	mg/Kg wet	1.65		79.3	40-140	5.18	30	
2,4-Dinitrophenol	1.30	0.65	mg/Kg wet	1.65		78.7	15-140	9.41	30	†
2,4-Dinitrotoluene	1.44	0.34	mg/Kg wet	1.65		87.0	40-140	6.35	30	
2,6-Dinitrotoluene	1.44	0.34	mg/Kg wet	1.65		87.4	40-140	6.19	30	
Di-n-octylphthalate	1.22	0.34	mg/Kg wet	1.65		74.1	40-140	9.74	30	
1,2-Diphenylhydrazine/Azobenzene	1.22	0.34	mg/Kg wet	1.65		73.7	40-140	7.92	30	
Fluoranthene	1.41	0.17	mg/Kg wet	1.65		85.7	40-140	6.33	30	
Fluorene	1.30	0.17	mg/Kg wet	1.65		78.6	40-140	4.95	30	
Hexachlorobenzene	1.18	0.34	mg/Kg wet	1.65		71.5	40-140	1.30	30	
Hexachlorobutadiene	1.12	0.34	mg/Kg wet	1.65		67.9	40-140	8.90	30	
Hexachloroethane	1.02	0.34	mg/Kg wet	1.65		61.9	40-140	7.32	30	
Indeno(1,2,3-cd)pyrene	1.31	0.17	mg/Kg wet	1.65		79.2	40-140	6.64	30	
Isophorone	1.35	0.34	mg/Kg wet	1.65		81.6	40-140	5.53	30	
2-Methylnaphthalene	1.28	0.17	mg/Kg wet	1.65		77.5	40-140	6.29	30	
2-Methylphenol	1.25	0.34	mg/Kg wet	1.65		75.7	30-130	0.225	30	
3/4-Methylphenol	1.26	0.34	mg/Kg wet	1.65		76.4	30-130	4.36	30	
Naphthalene	1.07	0.17	mg/Kg wet	1.65		65.0	40-140	9.57	30	
Nitrobenzene	1.15	0.34	mg/Kg wet	1.65		69.9	40-140	12.1	30	
2-Nitrophenol	1.22	0.34	mg/Kg wet	1.65		74.2	30-130	9.32	30	
4-Nitrophenol	1.52	0.65	mg/Kg wet	1.65		92.4	15-140	7.71	30	†
Pentachlorophenol	0.883	0.34	mg/Kg wet	1.65		53.5	30-130	5.67	30	V-05
Phenanthrene	1.31	0.17	mg/Kg wet	1.65		79.6	40-140	5.59	30	
Phenol	1.22	0.34	mg/Kg wet	1.65		74.0	15-140	5.57	30	†
Pyrene	1.34	0.17	mg/Kg wet	1.65		81.2	40-140	7.94	30	
Pyridine	0.798	0.34	mg/Kg wet	1.65		48.4	30-140	7.16	30	†
1,2,4-Trichlorobenzene	1.11	0.34	mg/Kg wet	1.65		67.1	40-140	7.55	30	
2,4,5-Trichlorophenol	1.43	0.34	mg/Kg wet	1.65		86.4	30-130	7.13	30	
2,4,6-Trichlorophenol	1.41	0.34	mg/Kg wet	1.65		85.4	30-130	4.30	30	
Surrogate: 2-Fluorophenol	3.88		mg/Kg wet	6.60		58.7	30-130			
Surrogate: Phenol-d6	5.54		mg/Kg wet	6.60		84.0	30-130			
Surrogate: Nitrobenzene-d5	2.48		mg/Kg wet	3.30		75.2	30-130			
Surrogate: 2-Fluorobiphenyl	2.58		mg/Kg wet	3.30		78.3	30-130			
Surrogate: 2,4,6-Tribromophenol	5.03		mg/Kg wet	6.60		76.1	30-130			
Surrogate: p-Terphenyl-d14	3.38		mg/Kg wet	3.30		102	30-130			

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**QUALITY CONTROL**
**Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B284180 - SW-846 3540C</b>										
<b>Blank (B284180-BLK1)</b>										
Prepared: 06/17/21 Analyzed: 06/21/21										
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	0.123		mg/Kg wet	0.196		63.0	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.131		mg/Kg wet	0.196		66.9	30-150			
Surrogate: Tetrachloro-m-xylene	0.116		mg/Kg wet	0.196		58.9	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.121		mg/Kg wet	0.196		61.5	30-150			
<b>LCS (B284180-BS1)</b>										
Prepared: 06/17/21 Analyzed: 06/21/21										
Aroclor-1016	0.12	0.020	mg/Kg wet	0.196		60.4	40-140			
Aroclor-1016 [2C]	0.12	0.020	mg/Kg wet	0.196		62.5	40-140			
Aroclor-1260	0.11	0.020	mg/Kg wet	0.196		54.8	40-140			
Aroclor-1260 [2C]	0.11	0.020	mg/Kg wet	0.196		55.7	40-140			
Surrogate: Decachlorobiphenyl	0.121		mg/Kg wet	0.196		61.5	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.127		mg/Kg wet	0.196		65.0	30-150			
Surrogate: Tetrachloro-m-xylene	0.121		mg/Kg wet	0.196		61.7	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.126		mg/Kg wet	0.196		64.2	30-150			
<b>LCS Dup (B284180-BSD1)</b>										
Prepared: 06/17/21 Analyzed: 06/21/21										
Aroclor-1016	0.15	0.020	mg/Kg wet	0.200		72.6	40-140	20.3	30	
Aroclor-1016 [2C]	0.15	0.020	mg/Kg wet	0.200		73.1	40-140	17.7	30	
Aroclor-1260	0.13	0.020	mg/Kg wet	0.200		67.5	40-140	22.6	30	
Aroclor-1260 [2C]	0.14	0.020	mg/Kg wet	0.200		69.8	40-140	24.5	30	
Surrogate: Decachlorobiphenyl	0.160		mg/Kg wet	0.200		79.8	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.170		mg/Kg wet	0.200		84.8	30-150			
Surrogate: Tetrachloro-m-xylene	0.146		mg/Kg wet	0.200		73.1	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.152		mg/Kg wet	0.200		76.2	30-150			

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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
<b>Batch B284242 - SW-846 3546</b>										
<b>Blank (B284242-BLK1)</b>										
Prepared: 06/17/21 Analyzed: 06/20/21										
C9-C18 Aliphatics	ND	10	mg/Kg wet							
C19-C36 Aliphatics	ND	10	mg/Kg wet							
Unadjusted C11-C22 Aromatics	ND	10	mg/Kg wet							
C11-C22 Aromatics	ND	10	mg/Kg wet							
Acenaphthene	ND	0.10	mg/Kg wet							
Acenaphthylene	ND	0.10	mg/Kg wet							
Anthracene	ND	0.10	mg/Kg wet							
Benzo(a)anthracene	ND	0.10	mg/Kg wet							
Benzo(a)pyrene	ND	0.10	mg/Kg wet							
Benzo(b)fluoranthene	ND	0.10	mg/Kg wet							
Benzo(g,h,i)perylene	ND	0.10	mg/Kg wet							
Benzo(k)fluoranthene	ND	0.10	mg/Kg wet							
Chrysene	ND	0.10	mg/Kg wet							
Dibenz(a,h)anthracene	ND	0.10	mg/Kg wet							
Fluoranthene	ND	0.10	mg/Kg wet							
Fluorene	ND	0.10	mg/Kg wet							
Indeno(1,2,3-cd)pyrene	ND	0.10	mg/Kg wet							
2-Methylnaphthalene	ND	0.10	mg/Kg wet							
Naphthalene	ND	0.10	mg/Kg wet							
Phenanthrene	ND	0.10	mg/Kg wet							
Pyrene	ND	0.10	mg/Kg wet							
Naphthalene-aliphatic fraction	ND	0.10	mg/Kg wet							
2-Methylnaphthalene-aliphatic fraction	ND	0.10	mg/Kg wet							
Surrogate: Chlorooctadecane (COD)	3.75		mg/Kg wet	5.00		75.0	40-140			
Surrogate: o-Terphenyl (OTP)	3.59		mg/Kg wet	5.00		71.8	40-140			
Surrogate: 2-Bromonaphthalene	5.12		mg/Kg wet	5.00		102	40-140			
Surrogate: 2-Fluorobiphenyl	5.29		mg/Kg wet	5.00		106	40-140			
<b>LCS (B284242-BS1)</b>										
Prepared: 06/17/21 Analyzed: 06/20/21										
C9-C18 Aliphatics	24.3	10	mg/Kg wet	30.0		80.9	40-140			
C19-C36 Aliphatics	36.8	10	mg/Kg wet	40.0		92.1	40-140			
Unadjusted C11-C22 Aromatics	73.8	10	mg/Kg wet	85.0		86.8	40-140			
Acenaphthene	3.59	0.10	mg/Kg wet	5.00		71.8	40-140			
Acenaphthylene	3.39	0.10	mg/Kg wet	5.00		67.7	40-140			
Anthracene	3.98	0.10	mg/Kg wet	5.00		79.5	40-140			
Benzo(a)anthracene	4.73	0.10	mg/Kg wet	5.00		94.6	40-140			
Benzo(a)pyrene	4.50	0.10	mg/Kg wet	5.00		89.9	40-140			
Benzo(b)fluoranthene	4.34	0.10	mg/Kg wet	5.00		86.8	40-140			
Benzo(g,h,i)perylene	4.11	0.10	mg/Kg wet	5.00		82.2	40-140			
Benzo(k)fluoranthene	4.23	0.10	mg/Kg wet	5.00		84.7	40-140			
Chrysene	4.47	0.10	mg/Kg wet	5.00		89.4	40-140			
Dibenz(a,h)anthracene	4.36	0.10	mg/Kg wet	5.00		87.2	40-140			
Fluoranthene	4.27	0.10	mg/Kg wet	5.00		85.3	40-140			
Fluorene	3.68	0.10	mg/Kg wet	5.00		73.6	40-140			
Indeno(1,2,3-cd)pyrene	4.09	0.10	mg/Kg wet	5.00		81.9	40-140			
2-Methylnaphthalene	3.27	0.10	mg/Kg wet	5.00		65.4	40-140			
Naphthalene	3.08	0.10	mg/Kg wet	5.00		61.6	40-140			
Phenanthrene	4.06	0.10	mg/Kg wet	5.00		81.2	40-140			
Pyrene	4.38	0.10	mg/Kg wet	5.00		87.6	40-140			
Naphthalene-aliphatic fraction	ND	0.10	mg/Kg wet	5.00			0-5			
2-Methylnaphthalene-aliphatic fraction	ND	0.10	mg/Kg wet	5.00			0-5			
Surrogate: Chlorooctadecane (COD)	4.03		mg/Kg wet	5.00		80.7	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
<b>Batch B284242 - SW-846 3546</b>										
<b>LCS (B284242-BS1)</b>										
					Prepared: 06/17/21 Analyzed: 06/20/21					
Surrogate: o-Terphenyl (OTP)	3.87		mg/Kg wet	5.00		77.4	40-140			
Surrogate: 2-Bromonaphthalene	5.32		mg/Kg wet	5.00		106	40-140			
Surrogate: 2-Fluorobiphenyl	5.27		mg/Kg wet	5.00		105	40-140			
<b>LCS Dup (B284242-BSD1)</b>										
					Prepared: 06/17/21 Analyzed: 06/20/21					
C9-C18 Aliphatics	23.1	10	mg/Kg wet	30.0		77.0	40-140	4.96	25	
C19-C36 Aliphatics	35.9	10	mg/Kg wet	40.0		89.9	40-140	2.45	25	
Unadjusted C11-C22 Aromatics	70.3	10	mg/Kg wet	85.0		82.7	40-140	4.82	25	
Acenaphthene	3.30	0.10	mg/Kg wet	5.00		66.1	40-140	8.34	25	
Acenaphthylene	3.12	0.10	mg/Kg wet	5.00		62.3	40-140	8.31	25	
Anthracene	3.75	0.10	mg/Kg wet	5.00		75.0	40-140	5.86	25	
Benzo(a)anthracene	4.53	0.10	mg/Kg wet	5.00		90.6	40-140	4.36	25	
Benzo(a)pyrene	4.30	0.10	mg/Kg wet	5.00		86.0	40-140	4.42	25	
Benzo(b)fluoranthene	4.17	0.10	mg/Kg wet	5.00		83.4	40-140	4.02	25	
Benzo(g,h,i)perylene	3.91	0.10	mg/Kg wet	5.00		78.3	40-140	4.88	25	
Benzo(k)fluoranthene	4.04	0.10	mg/Kg wet	5.00		80.9	40-140	4.62	25	
Chrysene	4.26	0.10	mg/Kg wet	5.00		85.2	40-140	4.72	25	
Dibenz(a,h)anthracene	4.18	0.10	mg/Kg wet	5.00		83.5	40-140	4.29	25	
Fluoranthene	4.07	0.10	mg/Kg wet	5.00		81.5	40-140	4.63	25	
Fluorene	3.40	0.10	mg/Kg wet	5.00		68.0	40-140	7.88	25	
Indeno(1,2,3-cd)pyrene	3.93	0.10	mg/Kg wet	5.00		78.6	40-140	4.07	25	
2-Methylnaphthalene	3.02	0.10	mg/Kg wet	5.00		60.5	40-140	7.77	25	
Naphthalene	2.88	0.10	mg/Kg wet	5.00		57.6	40-140	6.68	25	
Phenanthrene	3.82	0.10	mg/Kg wet	5.00		76.4	40-140	6.05	25	
Pyrene	4.18	0.10	mg/Kg wet	5.00		83.6	40-140	4.74	25	
Naphthalene-aliphatic fraction	ND	0.10	mg/Kg wet	5.00			0-5			
2-Methylnaphthalene-aliphatic fraction	ND	0.10	mg/Kg wet	5.00			0-5			
Surrogate: Chlorooctadecane (COD)	3.82		mg/Kg wet	5.00		76.5	40-140			
Surrogate: o-Terphenyl (OTP)	3.61		mg/Kg wet	5.00		72.1	40-140			
Surrogate: 2-Bromonaphthalene	5.11		mg/Kg wet	5.00		102	40-140			
Surrogate: 2-Fluorobiphenyl	5.09		mg/Kg wet	5.00		102	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 B284271 - SW-846 3050B**
**Blank (B284271-BLK1)**

Prepared &amp; Analyzed: 06/18/21

Antimony	ND	1.6	mg/Kg wet							
Barium	ND	1.6	mg/Kg wet							
Beryllium	ND	0.16	mg/Kg wet							
Cadmium	ND	0.32	mg/Kg wet							
Chromium	ND	0.64	mg/Kg wet							
Nickel	ND	0.64	mg/Kg wet							
Selenium	ND	3.2	mg/Kg wet							
Thallium	ND	1.6	mg/Kg wet							
Vanadium	ND	0.64	mg/Kg wet							
Zinc	ND	0.64	mg/Kg wet							

**LCS (B284271-BS1)**

Prepared &amp; Analyzed: 06/18/21

Antimony	90.2	5.0	mg/Kg wet	134		67.3	1.9-200.7			
Barium	161	5.0	mg/Kg wet	183		88.0	82.5-117.5			
Beryllium	99.2	0.50	mg/Kg wet	116		85.5	83.4-116.4			
<b>Cadmium</b>	71.5	1.0	mg/Kg wet	89.5		<b>79.9</b>	* 82.8-117.3			L-07
<b>Chromium</b>	82.5	2.0	mg/Kg wet	101		<b>81.7</b>	* 82.1-117.8			L-07
<b>Nickel</b>	53.5	2.0	mg/Kg wet	68.3		<b>78.4</b>	* 82.1-117.7			L-07
Selenium	149	10	mg/Kg wet	182		81.8	79.7-120.3			
<b>Thallium</b>	69.2	5.0	mg/Kg wet	87.7		<b>78.9</b>	* 81.1-118.6			L-07
Vanadium	126	2.0	mg/Kg wet	153		82.1	79.1-120.9			
Zinc	187	2.0	mg/Kg wet	228		81.9	80.7-118.9			

**LCS Dup (B284271-BSD1)**

Prepared &amp; Analyzed: 06/18/21

Antimony	95.3	4.9	mg/Kg wet	134		71.1	1.9-200.7	5.56	30	
<b>Barium</b>	150	4.9	mg/Kg wet	183		<b>81.8</b>	* 82.5-117.5	7.23	20	L-07
Beryllium	106	0.49	mg/Kg wet	116		91.4	83.4-116.4	6.65	30	
Cadmium	76.9	0.99	mg/Kg wet	89.5		85.9	82.8-117.3	7.18	20	
Chromium	86.4	2.0	mg/Kg wet	101		85.5	82.1-117.8	4.61	30	
Nickel	59.3	2.0	mg/Kg wet	68.3		86.8	82.1-117.7	10.2	30	
Selenium	153	9.9	mg/Kg wet	182		84.1	79.7-120.3	2.70	30	
Thallium	71.4	4.9	mg/Kg wet	87.7		81.4	81.1-118.6	3.14	30	
Vanadium	128	2.0	mg/Kg wet	153		83.8	79.1-120.9	2.04	30	
Zinc	196	2.0	mg/Kg wet	228		85.8	80.7-118.9	4.64	30	

**Batch B284383 - SW-846 7471**
**Blank (B284383-BLK1)**

Prepared: 06/21/21 Analyzed: 06/22/21

Mercury	ND	0.025	mg/Kg wet							
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**LCS (B284383-BS1)**

Prepared: 06/21/21 Analyzed: 06/22/21

Mercury	14.1	0.75	mg/Kg wet	15.6		90.3	59.3-140.4			
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**QUALITY CONTROL**
**Metals Analyses (Total) - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B284383 - SW-846 7471</b>									
<b>LCS Dup (B284383-BSD1)</b>					Prepared: 06/21/21 Analyzed: 06/22/21				
Mercury	14.0	0.75	mg/Kg wet	15.6		89.8 59.3-140.4	0.563	20	
<b>Batch B284524 - SW-846 3051</b>									
<b>Blank (B284524-BLK1)</b>					Prepared & Analyzed: 06/22/21				
Arsenic	ND	3.3	mg/Kg wet						
Lead	ND	0.49	mg/Kg wet						
Silver	ND	0.33	mg/Kg wet						
<b>LCS (B284524-BS1)</b>					Prepared & Analyzed: 06/22/21				
Arsenic	147	9.9	mg/Kg wet	170		86.5 82.9-117.6			
Lead	125	1.5	mg/Kg wet	140		89.2 82.9-117.1			
Silver	46.2	0.99	mg/Kg wet	50.1		92.2 80.2-120			
<b>LCS Dup (B284524-BSD1)</b>					Prepared & Analyzed: 06/22/21				
Arsenic	148	10	mg/Kg wet	170		87.3 82.9-117.6	0.872	30	
Lead	125	1.5	mg/Kg wet	140		89.6 82.9-117.1	0.494	30	
Silver	45.7	1.0	mg/Kg wet	50.1		91.3 80.2-120	1.01	30	
<b>Reference (B284524-SRM1) MRL Check</b>					Prepared & Analyzed: 06/22/21				
Lead	0.443	0.49	mg/Kg wet	0.486		91.3 80-120			

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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
<b>Batch B284239 - SW-846 9045C</b>										
<b>LCS (B284239-BS1)</b>				Prepared & Analyzed: 06/17/21						
pH	5.96		pH Units	6.00		99.2	90-110			
<b>Duplicate (B284239-DUP1)</b>				<b>Source: 21F1036-02</b>		Prepared & Analyzed: 06/17/21				
pH	7.5		pH Units		7.9			4.57	10	
<b>Batch B284299 - SM21-22 2510B Modified</b>										
<b>Blank (B284299-BLK1)</b>				Prepared & Analyzed: 06/18/21						
Specific conductance	ND	2.0	µmhos/cm							
<b>LCS (B284299-BS1)</b>				Prepared & Analyzed: 06/18/21						
Specific conductance	140		µmhos/cm	137		102	90-114			
<b>Batch B284300 - SW-846 9014</b>										
<b>Blank (B284300-BLK1)</b>				Prepared: 06/18/21 Analyzed: 06/20/21						
Reactive Cyanide	ND	0.40	mg/Kg							
<b>LCS (B284300-BS1)</b>				Prepared: 06/18/21 Analyzed: 06/20/21						
Reactive Cyanide	9.5	0.40	mg/Kg	10.0		95.4	81.3-111			
<b>LCS (B284300-BS2)</b>				Prepared: 06/18/21 Analyzed: 06/20/21						
Reactive Cyanide	9.5	0.40	mg/Kg	10.0		95.4	81.3-111			
<b>Batch B284302 - SW-846 9030A</b>										
<b>Blank (B284302-BLK1)</b>				Prepared: 06/18/21 Analyzed: 06/20/21						
Reactive Sulfide	ND	2.0	mg/Kg							
<b>LCS (B284302-BS1)</b>				Prepared: 06/18/21 Analyzed: 06/20/21						
Reactive Sulfide	4.4	2.0	mg/Kg	4.80		91.7	71.8-120			
<b>LCS (B284302-BS2)</b>				Prepared: 06/18/21 Analyzed: 06/20/21						
Reactive Sulfide	4.4	2.0	mg/Kg	4.80		91.7	71.8-120			
<b>Batch B284313 - % Solids</b>										
<b>Duplicate (B284313-DUP4)</b>				<b>Source: 21F1036-01</b>		Prepared: 06/18/21 Analyzed: 06/19/21				
% Solids	89.4		% Wt		90.1			0.742	5	



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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 B284313 - % Solids**
**Duplicate (B284313-DUP5)**
**Source: 21F1036-02**

Prepared: 06/18/21 Analyzed: 06/19/21

% Solids	85.4		% Wt		88.8			3.86	5	
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## IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

LCS

*SW-846 8082A*

 Lab Sample ID:                     B284180-BS1                          Date(s) Analyzed:           06/21/2021                     06/21/2021          

Instrument ID (1): \_\_\_\_\_      Instrument ID (2): \_\_\_\_\_

GC Column (1):                      ID:                      (mm)      GC Column (2):                      ID:                      (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.12	
	2	0.000	-0.030	0.030	0.12	0.0
Aroclor-1260	1	0.000	-0.030	0.030	0.11	
	2	0.000	-0.030	0.030	0.11	0.0

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## IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

**LCS Dup**

*SW-846 8082A*

 Lab Sample ID:                     B284180-BSD1                          Date(s) Analyzed:           06/21/2021                     06/21/2021          

Instrument ID (1): \_\_\_\_\_      Instrument ID (2): \_\_\_\_\_

GC Column (1):                      ID:                      (mm)      GC Column (2):                      ID:                      (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.15	
	2	0.000	-0.030	0.030	0.15	0.0
Aroclor-1260	1	0.000	-0.030	0.030	0.13	
	2	0.000	-0.030	0.030	0.14	0.0

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**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.
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.
O-32	A dilution was performed as part of the standard analytical procedure.
V-05	Continuing calibration verification (CCV) did not meet method specifications and was biased on the low side for this compound.
V-06	Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side for this compound.
V-16	Response factor is less than method specified minimum acceptable value. Reduced precision and accuracy may be associated with reported result.
V-20	Continuing calibration verification (CCV) 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.

**CERTIFICATIONS**
**Certified Analyses included in this Report**

Analyte	Certifications
<b>MADEP EPH rev 2.1 in Soil</b>	
C9-C18 Aliphatics	CT,NC,ME,NH-P
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,ME
Naphthalene	CT,NC,ME,NH-P
Phenanthrene	CT,NC,ME,NH-P
Pyrene	CT,NC,ME,NH-P
<b>MADEP EPH rev 2.1 in Water</b>	
C9-C18 Aliphatics	CT,NC,ME,NH-P
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,ME
Naphthalene	CT,NC,ME,NH-P
Phenanthrene	CT,NC,ME,NH-P
Pyrene	CT,NC,ME,NH-P
<b>SW-846 1030 in Soil</b>	
Ignitability	NY,NH,CT,NC,ME,VA
<b>SW-846 6010D in Soil</b>	

**CERTIFICATIONS**

**Certified Analyses included in this Report**

Analyte	Certifications
<b>SW-846 6010D in Soil</b>	
Antimony	CT,NH,NY,ME,VA,NC
Arsenic	CT,NH,NY,ME,VA,NC
Barium	CT,NH,NY,ME,VA,NC
Beryllium	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
Nickel	CT,NH,NY,ME,VA,NC
Selenium	CT,NH,NY,ME,VA,NC
Silver	CT,NH,NY,ME,VA,NC
Thallium	CT,NH,NY,ME,VA,NC
Vanadium	CT,NH,NY,ME,VA,NC
Zinc	CT,NH,NY,ME,VA,NC
<b>SW-846 7471B in Soil</b>	
Mercury	CT,NH,NY,NC,ME,VA
<b>SW-846 8082A in Soil</b>	
Aroclor-1016	CT,NH,NY,ME,NC,VA,PA
Aroclor-1016 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1221	CT,NH,NY,ME,NC,VA,PA
Aroclor-1221 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1232	CT,NH,NY,ME,NC,VA,PA
Aroclor-1232 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1242	CT,NH,NY,ME,NC,VA,PA
Aroclor-1242 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1248	CT,NH,NY,ME,NC,VA,PA
Aroclor-1248 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1254	CT,NH,NY,ME,NC,VA,PA
Aroclor-1254 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1260	CT,NH,NY,ME,NC,VA,PA
Aroclor-1260 [2C]	CT,NH,NY,ME,NC,VA,PA
Aroclor-1262	NY,NC,VA,PA
Aroclor-1262 [2C]	NY,NC,VA,PA
Aroclor-1268	NY,NC,VA,PA
Aroclor-1268 [2C]	NY,NC,VA,PA
<b>SW-846 8260C-D in Soil</b>	
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

**CERTIFICATIONS**
**Certified Analyses included in this Report**

Analyte	Certifications
<i>SW-846 8260C-D in Soil</i>	
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
1,2-Dibromo-3-chloropropane (DBCP)	NY
1,2-Dibromoethane (EDB)	NY
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
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

**CERTIFICATIONS**
**Certified Analyses included in this Report**

Analyte	Certifications
<b>SW-846 8260C-D in Soil</b>	
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
<b>SW-846 8270D-E in Soil</b>	
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
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/Azobenzene	NY,NH
Fluoranthene	CT,NY,NH



**CERTIFICATIONS**
**Certified Analyses included in this Report**

Analyte	Certifications
<b><i>SW-846 8270D-E in Soil</i></b>	
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
2,4,5-Trichlorophenol	CT,NY,NH
2,4,6-Trichlorophenol	CT,NY,NH
<b><i>SW-846 8270D-E in Water</i></b>	
Acenaphthene	CT,NY,NH
Acenaphthylene	CT,NY,NH
Acetophenone	NY
Aniline	CT,NY
Anthracene	CT,NY,NH
Benzo(a)anthracene	CT,NY,NH
Benzo(a)pyrene	CT,NY,NH
Benzo(b)fluoranthene	CT,NY,NH
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	CT,NY,NH
1,3-Dichlorobenzene	CT,NY,NH

**CERTIFICATIONS**
**Certified Analyses included in this Report**

Analyte	Certifications
<i>SW-846 8270D-E in Water</i>	
1,4-Dichlorobenzene	CT,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/Azobenzene	NY
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
2,4,5-Trichlorophenol	CT,NY,NH
2,4,6-Trichlorophenol	CT,NY,NH

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Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2022
CT	Connecticut Department of Public Health	PH-0165	12/31/2022
NY	New York State Department of Health	10899 NELAP	04/1/2022
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2022
RI	Rhode Island Department of Health	LAO00112	12/30/2021
NC	North Carolina Div. of Water Quality	652	12/31/2021
NJ	New Jersey DEP	MA007 NELAP	06/30/2022
FL	Florida Department of Health	E871027 NELAP	06/30/2022
VT	Vermont Department of Health Lead Laboratory	LL720741	07/30/2022
ME	State of Maine	MA00100	06/9/2023
VA	Commonwealth of Virginia	460217	12/14/2021
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2021
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2022
NC-DW	North Carolina Department of Health	25703	07/31/2021
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2022
MI	Dept. of Env, Great Lakes, and Energy	9100	09/6/2021



# CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

21F1036

ALL SHADED AREAS are for LAB USE ONLY

Company: The Vertex Companies, Inc

Billing Information:

Address: 100N Washington St Boston MA

Email To: ksarson@vertexeng.com

Report To: K Sarson

Site Collection Info/Address:

Container Preservative Type \*\* Lab Project Manager:

\*\* Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other

Customer Project Name/Number: Wayland 67404

State: MA County/City: Wayland Time Zone Collected: [ ] PT [ ] MT [ ] CT [X] ET

Phone: Email:

Site/Facility ID #: Compliance Monitoring? [ ] Yes [ ] No

DW PWS ID #: DW Location Code:

Collected By (print): Kristen Sarson

Purchase Order #: Quote #:

Immediately Packed on Ice: [X] Yes [ ] No

Collected By (signature): [Signature]

Turnaround Date Required:

Field Filtered (if applicable): [ ] Yes [ ] No

Sample Disposal: [ ] Dispose as appropriate [ ] Return [ ] Archive [ ] Hold

Rush: [ ] Same Day [ ] Next Day [ ] 2 Day [X] 3 Day [ ] 4 Day [ ] 5 Day (Expedite Charges Apply)

Analysis: N/A

\* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start)		Composite End		Res Cl	# of Ctns
			Date	Time	Date	Time		
V-301-SP-20210617	Soil	Comp	6/17/21	1045				
V-302-SP-20210617	Soil	Comp	6/17/21	1100				

Analyses		Lab Profile/Line:
VOC	SNOC	Lab Sample Receipt Checklist: Custody Seals Present/Intact Y N <input checked="" type="checkbox"/> Custody Signatures Present Y N <input checked="" type="checkbox"/> Collector Signature Present <input checked="" type="checkbox"/> N NA Bottles Intact <input checked="" type="checkbox"/> N NA Correct Bottles <input checked="" type="checkbox"/> N NA Sufficient Volume <input checked="" type="checkbox"/> N NA Samples Received on Ice <input checked="" type="checkbox"/> N NA VOA - Headspace Acceptable <input checked="" type="checkbox"/> N NA USDA Regulated Soils Y <input checked="" type="checkbox"/> NA Samples in Holding Time <input checked="" type="checkbox"/> N NA Residual Chlorine Present Y N <input checked="" type="checkbox"/> Cl Strips: Sample pH Acceptable Y N <input checked="" type="checkbox"/> pH Strips: Sulfide Present Y N <input checked="" type="checkbox"/> Lead Acetate Strips: _____  LAB USE ONLY: Lab Sample # / Comments:
HCB14 Metals	PCB w/ Soxhlet	
EPH Fractions only	Ignitability/Commissibility/Conductivity	
pH	Reactivity	

per client run all test on both samples and client does need ma mcp. JLH 6/18/2021

Customer Remarks / Special Conditions / Possible Hazards:

Type of Ice Used: Wet Blue Dry None  
Packing Material Used:  
Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): (Y) N N/A  
Lab Tracking #: 2676218  
Samples received via: FEDEX UPS Client Courier Pace Courier

Lab Sample Temperature Info:  
Temp Blank Received: Y N NA  
Therm ID#: \_\_\_\_\_  
Cooler 1 Temp Upon Receipt: \_\_\_\_\_ oC  
Cooler 1 Therm Corr. Factor: \_\_\_\_\_ oC  
Cooler 1 Corrected Temp: \_\_\_\_\_ oC  
Comments: 3.3

Released by/Company: (Signature) Date/Time: 6/17/21 @ 1331

Received by/Company: (Signature) Date/Time: 6/17 4:31

Received by/Company: (Signature) Date/Time: 6/17/21 1631

MTJL LAB USE ONLY  
Table #:  
Acctnum:  
Template:  
Prelogin:  
PM:  
PB:

Trip Blank Received: Y N NA  
HCL MeOH TSP Other  
Non Conformance(s): YES / NO Page: of:



April 19, 2019

Kristen Sarson  
Vertex Engineering - Boston  
100 North Washington St. Suite 302  
Boston, MA 02114

Project Location: Wayland, MA  
Client Job Number:  
Project Number: 46047  
Laboratory Work Order Number: 19D0736

Enclosed are results of analyses for samples received by the laboratory on April 12, 2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, reading "Jessica Hoffman", is displayed on a light blue rectangular background. The signature is written in a cursive, flowing style.

Jessica L. Hoffman  
Project Manager

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

Vertex Engineering - Boston  
 100 North Washington St. Suite 302  
 Boston, MA 02114  
 ATTN: Kristen Sarson

REPORT DATE: 4/19/2019

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 46047

**ANALYTICAL SUMMARY**

WORK ORDER NUMBER: 19D0736

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

PROJECT LOCATION: Wayland, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
V-201	19D0736-01	Soil		- SM 2540G SW-846 6010D	MA M-CT007/CT PH-0618/NY11301
V-202	19D0736-02	Soil		- SM 2540G SW-846 6010D	MA M-CT007/CT PH-0618/NY11301
V-203	19D0736-03	Soil		- SM 2540G SW-846 6010D	MA M-CT007/CT PH-0618/NY11301
V-204	19D0736-04	Soil		- SM 2540G SW-846 6010D	MA M-CT007/CT PH-0618/NY11301
V-205	19D0736-05	Soil		- SM 2540G SW-846 6010D	MA M-CT007/CT PH-0618/NY11301
V-206	19D0736-06	Soil		- SM 2540G SW-846 6010D	MA M-CT007/CT PH-0618/NY11301
Firing Range	19D0736-07	Soil		SM 2540G SM21-22 2510B Modified SW-846 1030 SW-846 6010D 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	

**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 a select list of metals was requested and reported.

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SW-846 6010D

---

**Qualifications:****MS-19**

Sample to spike ratio is greater than or equal to 4:1. Spiked amount is not representative of the native amount in the sample. Appropriate or meaningful recoveries cannot be calculated.

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

19D0736-01[V-201], B228378-MS1

SW-846 8082A

---

**Qualifications:****O-32**

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

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

19D0736-07[Firing Range]

SW-846 8260C

---

**Qualifications:****L-02**

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

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

B228262-BS1, B228262-BSD1

**Carbon Disulfide**

B228262-BS1, B228262-BSD1

**Chloroethane**

B228262-BS1, B228262-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:****Trichlorofluoromethane (Freon 11)**

B228262-BSD1

---

**V-05**

Continuing calibration verification (CCV) did not meet method specifications and was biased on the low side for this compound.

**Analyte & Samples(s) Qualified:****1,2-Dibromo-3-chloropropane (DBP)**

19D0736-07[Firing Range], B228262-BLK1, B228262-BS1, B228262-BSD1, S034704-CCV1

**1,4-Dioxane (SIM)**

B228262-BS1, B228262-BSD1, S034704-CCV1

**2,2-Dichloropropane**

19D0736-07[Firing Range], B228262-BLK1, B228262-BS1, B228262-BSD1, S034704-CCV1

**Dichlorodifluoromethane (Freon 12)**

19D0736-07[Firing Range], B228262-BLK1, B228262-BS1, B228262-BSD1, S034704-CCV1

---

**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**

19D0736-07[Firing Range], B228262-BLK1, B228262-BS1, B228262-BSD1

---

**V-20**

Continuing calibration verification (CCV) 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:****Diethyl Ether**

B228262-BS1, B228262-BSD1, S034704-CCV1

**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**

19D0736-07[Firing Range], B228262-BLK1, B228262-BS1, B228262-BSD1, S034704-CCV1

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

---

**V-05**

Continuing calibration verification (CCV) did not meet method specifications and was biased on the low side for this compound.

**Analyte & Samples(s) Qualified:****2-Methylphenol**

19D0736-07[Firing Range], S034774-CCV1

---

**V-06**

Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side for this compound.

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

19D0736-07[Firing Range], S034774-CCV1

**Butylbenzylphthalate**

19D0736-07[Firing Range], S034774-CCV1

---

**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:****4-Chloroaniline**

B228235-BLK1, B228235-BS1, B228235-BSD1, S034781-CCV1

**Aniline**

B228235-BLK1, B228235-BS1, B228235-BSD1, S034781-CCV1

**SW-846 9045C****Qualifications:**

---

**H-03**

Sample received after recommended holding time was exceeded.

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

19D0736-07[Firing Range]

---

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**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 that reads "Tod Kopyscinski". The signature is written in a cursive, flowing style.

Tod E. Kopyscinski  
Laboratory Director

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19D0736

Date Received: 4/12/2019

Sampled: 4/11/2019 13:30

Field Sample #: V-201

Sample ID: 19D0736-01

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	41	1.7	mg/Kg dry	1		SW-846 6010D	4/17/19	4/18/19 18:13	EJB
Copper	4200	1.7	mg/Kg dry	5		SW-846 6010D	4/17/19	4/19/19 9:56	EJB
Lead	4000	2.6	mg/Kg dry	5		SW-846 6010D	4/17/19	4/19/19 9:56	EJB
Zinc	18	0.69	mg/Kg dry	1		SW-846 6010D	4/17/19	4/18/19 18:13	EJB

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19D0736

Date Received: 4/12/2019

Sampled: 4/11/2019 13:30

Field Sample #: V-201

Sample ID: 19D0736-01

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	93.3		% Wt	1		SM 2540G	4/14/19	4/15/19 12:39	CJT

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19D0736

Date Received: 4/12/2019

Sampled: 4/11/2019 13:30

Field Sample #: V-201

Sample ID: 19D0736-01

Sample Matrix: Soil

TCLP - Metals Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Lead	180	0.050	mg/L	5	MS-19	SW-846 6010D	4/16/19	4/17/19 16:33	EJB



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Project Location: Wayland, MA

Sample Description:

Work Order: 19D0736

Date Received: 4/12/2019

Field Sample #: V-201

Sampled: 4/11/2019 13:30

Sample ID: 19D0736-01

Sample Matrix: Soil

**Tungsten 200.7**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Tungsten 200.7	<0.4	0.4	mg/Kg	1		Tungsten 200.7		4/17/19 0:00	PEL

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19D0736

Date Received: 4/12/2019

Sampled: 4/11/2019 13:35

Field Sample #: V-202

Sample ID: 19D0736-02

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	140	1.7	mg/Kg dry	1		SW-846 6010D	4/17/19	4/18/19 18:18	EJB
Copper	4200	1.7	mg/Kg dry	5		SW-846 6010D	4/17/19	4/19/19 10:01	EJB
Lead	13000	2.6	mg/Kg dry	5		SW-846 6010D	4/17/19	4/19/19 10:01	EJB
Zinc	29	0.68	mg/Kg dry	1		SW-846 6010D	4/17/19	4/18/19 18:18	EJB

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19D0736

Date Received: 4/12/2019

Sampled: 4/11/2019 13:35

Field Sample #: V-202

Sample ID: 19D0736-02

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	95.4		% Wt	1		SM 2540G	4/14/19	4/15/19 12:39	CJT

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19D0736

Date Received: 4/12/2019

Sampled: 4/11/2019 13:35

Field Sample #: V-202

Sample ID: 19D0736-02

Sample Matrix: Soil

TCLP - Metals Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Lead	360	0.10	mg/L	10		SW-846 6010D	4/16/19	4/17/19 16:39	EJB

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19D0736

Date Received: 4/12/2019

Sampled: 4/11/2019 13:35

Field Sample #: V-202

Sample ID: 19D0736-02

Sample Matrix: Soil

**Tungsten 200.7**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Tungsten 200.7	14	0.3	mg/Kg	1		Tungsten 200.7		4/17/19 0:00	PEL

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19D0736

Date Received: 4/12/2019

Sampled: 4/11/2019 13:40

Field Sample #: V-203

Sample ID: 19D0736-03

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.7	mg/Kg dry	1		SW-846 6010D	4/17/19	4/18/19 18:23	EJB
Copper	120	0.34	mg/Kg dry	1		SW-846 6010D	4/17/19	4/18/19 18:23	EJB
Lead	46	0.52	mg/Kg dry	1		SW-846 6010D	4/17/19	4/18/19 18:23	EJB
Zinc	27	0.69	mg/Kg dry	1		SW-846 6010D	4/17/19	4/18/19 18:23	EJB

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19D0736

Date Received: 4/12/2019

Sampled: 4/11/2019 13:40

Field Sample #: V-203

Sample ID: 19D0736-03

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	95.3		% Wt	1		SM 2540G	4/14/19	4/15/19 12:39	CJT

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19D0736

Date Received: 4/12/2019

Sampled: 4/11/2019 13:40

Field Sample #: V-203

Sample ID: 19D0736-03

Sample Matrix: Soil

TCLP - Metals Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Lead	7.5	0.010	mg/L	1		SW-846 6010D	4/16/19	4/17/19 16:46	EJB



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

Project Location: Wayland, MA

Sample Description:

Work Order: 19D0736

Date Received: 4/12/2019

Sampled: 4/11/2019 13:40

Field Sample #: V-203

Sample ID: 19D0736-03

Sample Matrix: Soil

**Tungsten 200.7**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Tungsten 200.7	5	0.3	mg/Kg	1		Tungsten 200.7		4/17/19 0:00	PEL

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19D0736

Date Received: 4/12/2019

Sampled: 4/11/2019 13:45

Field Sample #: V-204

Sample ID: 19D0736-04

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	3.3	1.8	mg/Kg dry	1		SW-846 6010D	4/17/19	4/18/19 18:39	EJB
Copper	74	0.36	mg/Kg dry	1		SW-846 6010D	4/17/19	4/18/19 18:39	EJB
Lead	290	0.54	mg/Kg dry	1		SW-846 6010D	4/17/19	4/18/19 18:39	EJB
Zinc	37	0.72	mg/Kg dry	1		SW-846 6010D	4/17/19	4/18/19 18:39	EJB

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Project Location: Wayland, MA

Sample Description:

Work Order: 19D0736

Date Received: 4/12/2019

Sampled: 4/11/2019 13:45

Field Sample #: V-204

Sample ID: 19D0736-04

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	92.1		% Wt	1		SM 2540G	4/14/19	4/15/19 12:39	CJT

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19D0736

Date Received: 4/12/2019

Sampled: 4/11/2019 13:45

Field Sample #: V-204

Sample ID: 19D0736-04

Sample Matrix: Soil

TCLP - Metals Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Lead	8.3	0.010	mg/L	1		SW-846 6010D	4/16/19	4/17/19 16:53	EJB

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19D0736

Date Received: 4/12/2019

Sampled: 4/11/2019 13:45

Field Sample #: V-204

Sample ID: 19D0736-04

Sample Matrix: Soil

**Tungsten 200.7**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Tungsten 200.7	<0.4	0.4	mg/Kg	1		Tungsten 200.7		4/17/19 0:00	PEL

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19D0736

Date Received: 4/12/2019

Sampled: 4/11/2019 13:50

Field Sample #: V-205

Sample ID: 19D0736-05

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	5.1	1.8	mg/Kg dry	1		SW-846 6010D	4/17/19	4/18/19 18:44	EJB
Copper	1000	0.35	mg/Kg dry	1		SW-846 6010D	4/17/19	4/18/19 18:44	EJB
Lead	630	0.53	mg/Kg dry	1		SW-846 6010D	4/17/19	4/18/19 18:44	EJB
Zinc	23	0.71	mg/Kg dry	1		SW-846 6010D	4/17/19	4/18/19 18:44	EJB

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19D0736

Date Received: 4/12/2019

Sampled: 4/11/2019 13:50

Field Sample #: V-205

Sample ID: 19D0736-05

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	92.3		% Wt	1		SM 2540G	4/14/19	4/15/19 12:40	CJT

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19D0736

Date Received: 4/12/2019

Sampled: 4/11/2019 13:50

Field Sample #: V-205

Sample ID: 19D0736-05

Sample Matrix: Soil

TCLP - Metals Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Lead	48	0.010	mg/L	1		SW-846 6010D	4/16/19	4/17/19 17:00	EJB



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

Project Location: Wayland, MA

Sample Description:

Work Order: 19D0736

Date Received: 4/12/2019

Sampled: 4/11/2019 13:50

Field Sample #: V-205

Sample ID: 19D0736-05

Sample Matrix: Soil

**Tungsten 200.7**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Tungsten 200.7	<0.4	0.4	mg/Kg	1		Tungsten 200.7		4/17/19 0:00	PEL

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19D0736

Date Received: 4/12/2019

Sampled: 4/11/2019 13:55

Field Sample #: V-206

Sample ID: 19D0736-06

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	140	1.8	mg/Kg dry	1		SW-846 6010D	4/17/19	4/18/19 18:49	EJB
Copper	7100	3.5	mg/Kg dry	10		SW-846 6010D	4/17/19	4/19/19 10:06	EJB
Lead	24000	5.3	mg/Kg dry	10		SW-846 6010D	4/17/19	4/19/19 10:06	EJB
Zinc	69	0.70	mg/Kg dry	1		SW-846 6010D	4/17/19	4/18/19 18:49	EJB

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Project Location: Wayland, MA

Sample Description:

Work Order: 19D0736

Date Received: 4/12/2019

Sampled: 4/11/2019 13:55

Field Sample #: V-206

Sample ID: 19D0736-06

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	92.9		% Wt	1		SM 2540G	4/14/19	4/15/19 12:40	CJT

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Project Location: Wayland, MA

Sample Description:

Work Order: 19D0736

Date Received: 4/12/2019

Sampled: 4/11/2019 13:55

Field Sample #: V-206

Sample ID: 19D0736-06

Sample Matrix: Soil

TCLP - Metals Analyses

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Lead	830	0.10	mg/L	10		SW-846 6010D	4/16/19	4/17/19 17:07	EJB

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Project Location: Wayland, MA

Sample Description:

Work Order: 19D0736

Date Received: 4/12/2019

Sampled: 4/11/2019 13:55

Field Sample #: V-206

Sample ID: 19D0736-06

Sample Matrix: Soil

**Tungsten 200.7**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Tungsten 200.7	<0.3	0.3	mg/Kg	1		Tungsten 200.7		4/17/19 0:00	PEL

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Project Location: Wayland, MA

Sample Description:

Work Order: 19D0736

Date Received: 4/12/2019

Field Sample #: Firing Range

Sampled: 4/11/2019 14:00

Sample ID: 19D0736-07

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.083	mg/Kg dry	1		SW-846 8260C	4/15/19	4/15/19 11:29	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00083	mg/Kg dry	1		SW-846 8260C	4/15/19	4/15/19 11:29	MFF
Benzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	4/15/19	4/15/19 11:29	MFF
Bromobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	4/15/19	4/15/19 11:29	MFF
Bromochloromethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	4/15/19	4/15/19 11:29	MFF
Bromodichloromethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	4/15/19	4/15/19 11:29	MFF
Bromoform	ND	0.0017	mg/Kg dry	1		SW-846 8260C	4/15/19	4/15/19 11:29	MFF
Bromomethane	ND	0.0083	mg/Kg dry	1	V-34	SW-846 8260C	4/15/19	4/15/19 11:29	MFF
2-Butanone (MEK)	ND	0.033	mg/Kg dry	1		SW-846 8260C	4/15/19	4/15/19 11:29	MFF
n-Butylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	4/15/19	4/15/19 11:29	MFF
sec-Butylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	4/15/19	4/15/19 11:29	MFF
tert-Butylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	4/15/19	4/15/19 11:29	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00083	mg/Kg dry	1		SW-846 8260C	4/15/19	4/15/19 11:29	MFF
Carbon Disulfide	ND	0.0050	mg/Kg dry	1		SW-846 8260C	4/15/19	4/15/19 11:29	MFF
Carbon Tetrachloride	ND	0.0017	mg/Kg dry	1		SW-846 8260C	4/15/19	4/15/19 11:29	MFF
Chlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	4/15/19	4/15/19 11:29	MFF
Chlorodibromomethane	ND	0.00083	mg/Kg dry	1		SW-846 8260C	4/15/19	4/15/19 11:29	MFF
Chloroethane	ND	0.0083	mg/Kg dry	1		SW-846 8260C	4/15/19	4/15/19 11:29	MFF
Chloroform	ND	0.0033	mg/Kg dry	1		SW-846 8260C	4/15/19	4/15/19 11:29	MFF
Chloromethane	ND	0.0083	mg/Kg dry	1		SW-846 8260C	4/15/19	4/15/19 11:29	MFF
2-Chlorotoluene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	4/15/19	4/15/19 11:29	MFF
4-Chlorotoluene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	4/15/19	4/15/19 11:29	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0033	mg/Kg dry	1	V-05	SW-846 8260C	4/15/19	4/15/19 11:29	MFF
1,2-Dibromoethane (EDB)	ND	0.00083	mg/Kg dry	1		SW-846 8260C	4/15/19	4/15/19 11:29	MFF
Dibromomethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	4/15/19	4/15/19 11:29	MFF
1,2-Dichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	4/15/19	4/15/19 11:29	MFF
1,3-Dichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	4/15/19	4/15/19 11:29	MFF
1,4-Dichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	4/15/19	4/15/19 11:29	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0083	mg/Kg dry	1	V-05	SW-846 8260C	4/15/19	4/15/19 11:29	MFF
1,1-Dichloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	4/15/19	4/15/19 11:29	MFF
1,2-Dichloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	4/15/19	4/15/19 11:29	MFF
1,1-Dichloroethylene	ND	0.0033	mg/Kg dry	1		SW-846 8260C	4/15/19	4/15/19 11:29	MFF
cis-1,2-Dichloroethylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	4/15/19	4/15/19 11:29	MFF
trans-1,2-Dichloroethylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	4/15/19	4/15/19 11:29	MFF
1,2-Dichloropropane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	4/15/19	4/15/19 11:29	MFF
1,3-Dichloropropane	ND	0.00083	mg/Kg dry	1		SW-846 8260C	4/15/19	4/15/19 11:29	MFF
2,2-Dichloropropane	ND	0.0017	mg/Kg dry	1	V-05	SW-846 8260C	4/15/19	4/15/19 11:29	MFF
1,1-Dichloropropene	ND	0.0033	mg/Kg dry	1		SW-846 8260C	4/15/19	4/15/19 11:29	MFF
cis-1,3-Dichloropropene	ND	0.00083	mg/Kg dry	1		SW-846 8260C	4/15/19	4/15/19 11:29	MFF
trans-1,3-Dichloropropene	ND	0.00083	mg/Kg dry	1		SW-846 8260C	4/15/19	4/15/19 11:29	MFF
Diethyl Ether	ND	0.0083	mg/Kg dry	1		SW-846 8260C	4/15/19	4/15/19 11:29	MFF
Diisopropyl Ether (DIPE)	ND	0.00083	mg/Kg dry	1		SW-846 8260C	4/15/19	4/15/19 11:29	MFF
1,4-Dioxane	ND	0.17	mg/Kg dry	1	V-16	SW-846 8260C	4/15/19	4/15/19 11:29	MFF
Ethylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	4/15/19	4/15/19 11:29	MFF

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Project Location: Wayland, MA

Sample Description:

Work Order: 19D0736

Date Received: 4/12/2019

Field Sample #: Firing Range

Sampled: 4/11/2019 14:00

Sample ID: 19D0736-07

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	4/15/19	4/15/19 11:29	MFF
2-Hexanone (MBK)	ND	0.017	mg/Kg dry	1		SW-846 8260C	4/15/19	4/15/19 11:29	MFF
Isopropylbenzene (Cumene)	ND	0.0017	mg/Kg dry	1		SW-846 8260C	4/15/19	4/15/19 11:29	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0017	mg/Kg dry	1		SW-846 8260C	4/15/19	4/15/19 11:29	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0033	mg/Kg dry	1		SW-846 8260C	4/15/19	4/15/19 11:29	MFF
Methylene Chloride	ND	0.0083	mg/Kg dry	1		SW-846 8260C	4/15/19	4/15/19 11:29	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.017	mg/Kg dry	1		SW-846 8260C	4/15/19	4/15/19 11:29	MFF
Naphthalene	ND	0.0033	mg/Kg dry	1		SW-846 8260C	4/15/19	4/15/19 11:29	MFF
n-Propylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	4/15/19	4/15/19 11:29	MFF
Styrene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	4/15/19	4/15/19 11:29	MFF
1,1,1,2-Tetrachloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	4/15/19	4/15/19 11:29	MFF
1,1,1,2,2-Tetrachloroethane	ND	0.00083	mg/Kg dry	1		SW-846 8260C	4/15/19	4/15/19 11:29	MFF
Tetrachloroethylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	4/15/19	4/15/19 11:29	MFF
Tetrahydrofuran	ND	0.0083	mg/Kg dry	1		SW-846 8260C	4/15/19	4/15/19 11:29	MFF
Toluene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	4/15/19	4/15/19 11:29	MFF
1,2,3-Trichlorobenzene	ND	0.0033	mg/Kg dry	1		SW-846 8260C	4/15/19	4/15/19 11:29	MFF
1,2,4-Trichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	4/15/19	4/15/19 11:29	MFF
1,1,1-Trichloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	4/15/19	4/15/19 11:29	MFF
1,1,2-Trichloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	4/15/19	4/15/19 11:29	MFF
Trichloroethylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	4/15/19	4/15/19 11:29	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0083	mg/Kg dry	1		SW-846 8260C	4/15/19	4/15/19 11:29	MFF
1,2,3-Trichloropropane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	4/15/19	4/15/19 11:29	MFF
1,2,4-Trimethylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	4/15/19	4/15/19 11:29	MFF
1,3,5-Trimethylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	4/15/19	4/15/19 11:29	MFF
Vinyl Chloride	ND	0.0083	mg/Kg dry	1		SW-846 8260C	4/15/19	4/15/19 11:29	MFF
m+p Xylene	ND	0.0033	mg/Kg dry	1		SW-846 8260C	4/15/19	4/15/19 11:29	MFF
o-Xylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	4/15/19	4/15/19 11:29	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	93.8	70-130	4/15/19 11:29
Toluene-d8	101	70-130	4/15/19 11:29
4-Bromofluorobenzene	98.2	70-130	4/15/19 11:29

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Project Location: Wayland, MA

Sample Description:

Work Order: 19D0736

Date Received: 4/12/2019

Field Sample #: Firing Range

Sampled: 4/11/2019 14:00

Sample ID: 19D0736-07

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.17	mg/Kg dry	1		SW-846 8270D	4/15/19	4/17/19 13:58	BGL
Acenaphthylene	ND	0.17	mg/Kg dry	1		SW-846 8270D	4/15/19	4/17/19 13:58	BGL
Acetophenone	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/15/19	4/17/19 13:58	BGL
Aniline	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/15/19	4/17/19 13:58	BGL
Anthracene	ND	0.17	mg/Kg dry	1		SW-846 8270D	4/15/19	4/17/19 13:58	BGL
Benzo(a)anthracene	ND	0.17	mg/Kg dry	1		SW-846 8270D	4/15/19	4/17/19 13:58	BGL
Benzo(a)pyrene	ND	0.17	mg/Kg dry	1		SW-846 8270D	4/15/19	4/17/19 13:58	BGL
Benzo(b)fluoranthene	ND	0.17	mg/Kg dry	1		SW-846 8270D	4/15/19	4/17/19 13:58	BGL
Benzo(g,h,i)perylene	ND	0.17	mg/Kg dry	1		SW-846 8270D	4/15/19	4/17/19 13:58	BGL
Benzo(k)fluoranthene	ND	0.17	mg/Kg dry	1		SW-846 8270D	4/15/19	4/17/19 13:58	BGL
Bis(2-chloroethoxy)methane	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/15/19	4/17/19 13:58	BGL
Bis(2-chloroethyl)ether	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/15/19	4/17/19 13:58	BGL
Bis(2-chloroisopropyl)ether	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/15/19	4/17/19 13:58	BGL
Bis(2-Ethylhexyl)phthalate	ND	0.35	mg/Kg dry	1	V-06	SW-846 8270D	4/15/19	4/17/19 13:58	BGL
4-Bromophenylphenylether	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/15/19	4/17/19 13:58	BGL
Butylbenzylphthalate	ND	0.35	mg/Kg dry	1	V-06	SW-846 8270D	4/15/19	4/17/19 13:58	BGL
4-Chloroaniline	ND	0.68	mg/Kg dry	1		SW-846 8270D	4/15/19	4/17/19 13:58	BGL
2-Chloronaphthalene	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/15/19	4/17/19 13:58	BGL
2-Chlorophenol	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/15/19	4/17/19 13:58	BGL
Chrysene	ND	0.17	mg/Kg dry	1		SW-846 8270D	4/15/19	4/17/19 13:58	BGL
Dibenz(a,h)anthracene	ND	0.17	mg/Kg dry	1		SW-846 8270D	4/15/19	4/17/19 13:58	BGL
Dibenzofuran	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/15/19	4/17/19 13:58	BGL
Di-n-butylphthalate	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/15/19	4/17/19 13:58	BGL
1,2-Dichlorobenzene	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/15/19	4/17/19 13:58	BGL
1,3-Dichlorobenzene	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/15/19	4/17/19 13:58	BGL
1,4-Dichlorobenzene	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/15/19	4/17/19 13:58	BGL
3,3-Dichlorobenzidine	ND	0.17	mg/Kg dry	1		SW-846 8270D	4/15/19	4/17/19 13:58	BGL
2,4-Dichlorophenol	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/15/19	4/17/19 13:58	BGL
Diethylphthalate	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/15/19	4/17/19 13:58	BGL
2,4-Dimethylphenol	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/15/19	4/17/19 13:58	BGL
Dimethylphthalate	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/15/19	4/17/19 13:58	BGL
2,4-Dinitrophenol	ND	0.68	mg/Kg dry	1		SW-846 8270D	4/15/19	4/17/19 13:58	BGL
2,4-Dinitrotoluene	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/15/19	4/17/19 13:58	BGL
2,6-Dinitrotoluene	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/15/19	4/17/19 13:58	BGL
Di-n-octylphthalate	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/15/19	4/17/19 13:58	BGL
1,2-Diphenylhydrazine/Azobenzene	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/15/19	4/17/19 13:58	BGL
Fluoranthene	ND	0.17	mg/Kg dry	1		SW-846 8270D	4/15/19	4/17/19 13:58	BGL
Fluorene	ND	0.17	mg/Kg dry	1		SW-846 8270D	4/15/19	4/17/19 13:58	BGL
Hexachlorobenzene	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/15/19	4/17/19 13:58	BGL
Hexachlorobutadiene	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/15/19	4/17/19 13:58	BGL
Hexachloroethane	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/15/19	4/17/19 13:58	BGL
Indeno(1,2,3-cd)pyrene	ND	0.17	mg/Kg dry	1		SW-846 8270D	4/15/19	4/17/19 13:58	BGL
Isophorone	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/15/19	4/17/19 13:58	BGL
2-Methylnaphthalene	ND	0.17	mg/Kg dry	1		SW-846 8270D	4/15/19	4/17/19 13:58	BGL



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Project Location: Wayland, MA

Sample Description:

Work Order: 19D0736

Date Received: 4/12/2019

Field Sample #: Firing Range

Sampled: 4/11/2019 14:00

Sample ID: 19D0736-07

Sample Matrix: Soil

Semivolatle Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	0.35	mg/Kg dry	1	V-05	SW-846 8270D	4/15/19	4/17/19 13:58	BGL
3/4-Methylphenol	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/15/19	4/17/19 13:58	BGL
Naphthalene	ND	0.17	mg/Kg dry	1		SW-846 8270D	4/15/19	4/17/19 13:58	BGL
Nitrobenzene	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/15/19	4/17/19 13:58	BGL
2-Nitrophenol	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/15/19	4/17/19 13:58	BGL
4-Nitrophenol	ND	0.68	mg/Kg dry	1		SW-846 8270D	4/15/19	4/17/19 13:58	BGL
Pentachlorophenol	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/15/19	4/17/19 13:58	BGL
Phenanthrene	ND	0.17	mg/Kg dry	1		SW-846 8270D	4/15/19	4/17/19 13:58	BGL
Phenol	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/15/19	4/17/19 13:58	BGL
Pyrene	ND	0.17	mg/Kg dry	1		SW-846 8270D	4/15/19	4/17/19 13:58	BGL
1,2,4-Trichlorobenzene	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/15/19	4/17/19 13:58	BGL
2,4,5-Trichlorophenol	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/15/19	4/17/19 13:58	BGL
2,4,6-Trichlorophenol	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/15/19	4/17/19 13:58	BGL

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	64.6	30-130	4/17/19 13:58
Phenol-d6	78.1	30-130	4/17/19 13:58
Nitrobenzene-d5	77.0	30-130	4/17/19 13:58
2-Fluorobiphenyl	83.8	30-130	4/17/19 13:58
2,4,6-Tribromophenol	64.4	30-130	4/17/19 13:58
p-Terphenyl-d14	95.5	30-130	4/17/19 13:58

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Project Location: Wayland, MA

Sample Description:

Work Order: 19D0736

Date Received: 4/12/2019

Field Sample #: Firing Range

Sampled: 4/11/2019 14:00

Sample ID: 19D0736-07

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	4/15/19	4/16/19 17:02	JMB
Aroclor-1221 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	4/15/19	4/16/19 17:02	JMB
Aroclor-1232 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	4/15/19	4/16/19 17:02	JMB
Aroclor-1242 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	4/15/19	4/16/19 17:02	JMB
Aroclor-1248 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	4/15/19	4/16/19 17:02	JMB
Aroclor-1254 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	4/15/19	4/16/19 17:02	JMB
Aroclor-1260 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	4/15/19	4/16/19 17:02	JMB
Aroclor-1262 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	4/15/19	4/16/19 17:02	JMB
Aroclor-1268 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	4/15/19	4/16/19 17:02	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		97.2	30-150					4/16/19 17:02	
Decachlorobiphenyl [2]		97.5	30-150					4/16/19 17:02	
Tetrachloro-m-xylene [1]		94.6	30-150					4/16/19 17:02	
Tetrachloro-m-xylene [2]		99.9	30-150					4/16/19 17:02	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19D0736

Date Received: 4/12/2019

Sampled: 4/11/2019 14:00

Field Sample #: Firing Range

Sample ID: 19D0736-07

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	27	8.6	mg/Kg dry	1		SW-846 8100 Modified	4/15/19	4/19/19 5:15	KLB
<b>Surrogates</b>		<b>% Recovery</b>	<b>Recovery Limits</b>		<b>Flag/Qual</b>				
2-Fluorobiphenyl		82.1	40-140					4/19/19 5:15	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19D0736

Date Received: 4/12/2019

Field Sample #: Firing Range

Sampled: 4/11/2019 14:00

Sample ID: 19D0736-07

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	290	1.7	mg/Kg dry	1		SW-846 6010D	4/17/19	4/18/19 18:55	EJB
Arsenic	9.2	1.7	mg/Kg dry	1		SW-846 6010D	4/17/19	4/18/19 18:55	EJB
Barium	13	1.7	mg/Kg dry	1		SW-846 6010D	4/17/19	4/18/19 18:55	EJB
Beryllium	ND	0.17	mg/Kg dry	1		SW-846 6010D	4/17/19	4/18/19 18:55	EJB
Cadmium	0.40	0.17	mg/Kg dry	1		SW-846 6010D	4/17/19	4/18/19 18:55	EJB
Chromium	4.3	0.33	mg/Kg dry	1		SW-846 6010D	4/17/19	4/18/19 18:55	EJB
Lead	24000	5.0	mg/Kg dry	10		SW-846 6010D	4/17/19	4/19/19 10:11	EJB
Mercury	ND	0.025	mg/Kg dry	1		SW-846 7471B	4/18/19	4/19/19 12:23	AJL
Nickel	3.6	0.33	mg/Kg dry	1		SW-846 6010D	4/17/19	4/18/19 18:55	EJB
Selenium	ND	3.3	mg/Kg dry	1		SW-846 6010D	4/17/19	4/18/19 18:55	EJB
Silver	1.2	0.33	mg/Kg dry	1		SW-846 6010D	4/17/19	4/18/19 18:55	EJB
Thallium	ND	1.7	mg/Kg dry	1		SW-846 6010D	4/17/19	4/18/19 18:55	EJB
Vanadium	7.7	0.67	mg/Kg dry	1		SW-846 6010D	4/17/19	4/18/19 18:55	EJB
Zinc	46	0.67	mg/Kg dry	1		SW-846 6010D	4/17/19	4/18/19 18:55	EJB

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Project Location: Wayland, MA

Sample Description:

Work Order: 19D0736

Date Received: 4/12/2019

Field Sample #: Firing Range

Sampled: 4/11/2019 14:00

Sample ID: 19D0736-07

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	96.4		% Wt	1		SM 2540G	4/14/19	4/15/19 12:40	CJT
Ignitability	Absent		present/absent	1		SW-846 1030	4/18/19	4/18/19 16:16	KMV
pH @21.2°C	6.6		pH Units	1	H-03	SW-846 9045C	4/13/19	4/13/19 14:54	AIA
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	4/17/19	4/18/19 13:15	KMV
Reactive Sulfide	20	20	mg/Kg	1		SW-846 9030A	4/17/19	4/18/19 12:51	KMV
Specific conductance	2.0	2.0	µmhos/cm	1		SM21-22 2510B Modified	4/18/19	4/18/19 16:30	EC

**Sample Extraction Data**

**Prep Method: % Solids-SM 2540G**

Lab Number [Field ID]	Batch	Date
19D0736-01 [V-201]	B228183	04/14/19
19D0736-02 [V-202]	B228183	04/14/19
19D0736-03 [V-203]	B228183	04/14/19
19D0736-04 [V-204]	B228183	04/14/19
19D0736-05 [V-205]	B228183	04/14/19
19D0736-06 [V-206]	B228183	04/14/19
19D0736-07 [Firing Range]	B228183	04/14/19

**SM21-22 2510B Modified**

Lab Number [Field ID]	Batch	Initial [g]	Date
19D0736-07 [Firing Range]	B228560	1.00	04/18/19

**SW-846 1030**

Lab Number [Field ID]	Batch	Initial [g]	Date
19D0736-07 [Firing Range]	B228597	50.0	04/18/19

**Prep Method: SW-846 3050B-SW-846 6010D**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19D0736-01 [V-201]	B228464	1.55	50.0	04/17/19
19D0736-02 [V-202]	B228464	1.54	50.0	04/17/19
19D0736-03 [V-203]	B228464	1.53	50.0	04/17/19
19D0736-04 [V-204]	B228464	1.50	50.0	04/17/19
19D0736-05 [V-205]	B228464	1.53	50.0	04/17/19
19D0736-06 [V-206]	B228464	1.54	50.0	04/17/19
19D0736-07 [Firing Range]	B228464	1.55	50.0	04/17/19

**Prep Method: SW-846 3010A-SW-846 6010D**

Leachates were extracted on 4/15/2019 per SW-846 1311 in Batch B228239

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
19D0736-01 [V-201]	B228378	50.0	50.0	04/16/19
19D0736-02 [V-202]	B228378	50.0	50.0	04/16/19
19D0736-03 [V-203]	B228378	50.0	50.0	04/16/19
19D0736-04 [V-204]	B228378	50.0	50.0	04/16/19
19D0736-05 [V-205]	B228378	50.0	50.0	04/16/19
19D0736-06 [V-206]	B228378	50.0	50.0	04/16/19

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19D0736-07 [Firing Range]	B228326	0.630	50.0	04/18/19

**Prep Method: SW-846 3540C-SW-846 8082A**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
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**Sample Extraction Data**

**Prep Method: SW-846 3540C-SW-846 8082A**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19D0736-07 [Firing Range]	B228231	10.3	10.0	04/15/19

**Prep Method: SW-846 3546-SW-846 8100 Modified**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19D0736-07 [Firing Range]	B228233	30.0	1.00	04/15/19

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19D0736-07 [Firing Range]	B228262	6.25	10.0	04/15/19

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19D0736-07 [Firing Range]	B228235	30.4	1.00	04/15/19

**SW-846 9014**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19D0736-07 [Firing Range]	B228496	25.5	250	04/17/19

**SW-846 9030A**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19D0736-07 [Firing Range]	B228498	25.5	250	04/17/19

**SW-846 9045C**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19D0736-07 [Firing Range]	B228169	20.0		04/13/19

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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 B228262 - SW-846 5035**

**Blank (B228262-BLK1)**

Prepared: 04/05/19 Analyzed: 04/15/19

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							
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							V-05
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
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 B228262 - SW-846 5035**

**Blank (B228262-BLK1)**

Prepared: 04/05/19 Analyzed: 04/15/19

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	0.0486		mg/Kg wet	0.0500		97.2	70-130			
Surrogate: Toluene-d8	0.0504		mg/Kg wet	0.0500		101	70-130			
Surrogate: 4-Bromofluorobenzene	0.0497		mg/Kg wet	0.0500		99.4	70-130			

**LCS (B228262-BS1)**

Prepared: 04/05/19 Analyzed: 04/15/19

Acetone	0.226	0.10	mg/Kg wet	0.200		113	40-160			†
tert-Amyl Methyl Ether (TAME)	0.0197	0.0010	mg/Kg wet	0.0200		98.3	70-130			
Benzene	0.0198	0.0020	mg/Kg wet	0.0200		98.8	70-130			
Bromobenzene	0.0187	0.0020	mg/Kg wet	0.0200		93.7	70-130			
Bromochloromethane	0.0206	0.0020	mg/Kg wet	0.0200		103	70-130			
Bromodichloromethane	0.0203	0.0020	mg/Kg wet	0.0200		102	70-130			
Bromoform	0.0191	0.0020	mg/Kg wet	0.0200		95.6	70-130			
Bromomethane	0.0194	0.010	mg/Kg wet	0.0200		97.0	40-160		V-34	†
2-Butanone (MEK)	0.162	0.040	mg/Kg wet	0.200		80.9	40-160			†
n-Butylbenzene	0.0206	0.0020	mg/Kg wet	0.0200		103	70-130			
sec-Butylbenzene	0.0215	0.0020	mg/Kg wet	0.0200		108	70-130			
tert-Butylbenzene	0.0206	0.0020	mg/Kg wet	0.0200		103	70-130			
tert-Butyl Ethyl Ether (TBEE)	0.0179	0.0010	mg/Kg wet	0.0200		89.4	70-130			
<b>Carbon Disulfide</b>	0.0317	0.0060	mg/Kg wet	0.0200		<b>159</b> *	70-130			L-02
Carbon Tetrachloride	0.0227	0.0020	mg/Kg wet	0.0200		114	70-130			
Chlorobenzene	0.0203	0.0020	mg/Kg wet	0.0200		102	70-130			
Chlorodibromomethane	0.0213	0.0010	mg/Kg wet	0.0200		106	70-130			
<b>Chloroethane</b>	0.0263	0.010	mg/Kg wet	0.0200		<b>132</b> *	70-130			L-02
Chloroform	0.0203	0.0040	mg/Kg wet	0.0200		101	70-130			
Chloromethane	0.0221	0.010	mg/Kg wet	0.0200		111	40-160			†
2-Chlorotoluene	0.0186	0.0020	mg/Kg wet	0.0200		92.8	70-130			
4-Chlorotoluene	0.0197	0.0020	mg/Kg wet	0.0200		98.5	70-130			
1,2-Dibromo-3-chloropropane (DBCP)	0.0153	0.0020	mg/Kg wet	0.0200		76.3	70-130			V-05
1,2-Dibromoethane (EDB)	0.0196	0.0010	mg/Kg wet	0.0200		98.2	70-130			
Dibromomethane	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130			
1,2-Dichlorobenzene	0.0211	0.0020	mg/Kg wet	0.0200		105	70-130			
1,3-Dichlorobenzene	0.0214	0.0020	mg/Kg wet	0.0200		107	70-130			
1,4-Dichlorobenzene	0.0210	0.0020	mg/Kg wet	0.0200		105	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
<b>Batch B228262 - SW-846 5035</b>										
<b>LCS (B228262-BS1)</b>										
					Prepared: 04/05/19 Analyzed: 04/15/19					
Dichlorodifluoromethane (Freon 12)	0.0188	0.010	mg/Kg wet	0.0200		93.9	40-160			V-05 †
1,1-Dichloroethane	0.0207	0.0020	mg/Kg wet	0.0200		104	70-130			
1,2-Dichloroethane	0.0196	0.0020	mg/Kg wet	0.0200		98.1	70-130			
<b>1,1-Dichloroethylene</b>	0.0284	0.0040	mg/Kg wet	0.0200		<b>142</b>	<b>*</b> 70-130			L-02
cis-1,2-Dichloroethylene	0.0210	0.0020	mg/Kg wet	0.0200		105	70-130			
trans-1,2-Dichloroethylene	0.0209	0.0020	mg/Kg wet	0.0200		105	70-130			
1,2-Dichloropropane	0.0192	0.0020	mg/Kg wet	0.0200		96.2	70-130			
1,3-Dichloropropane	0.0182	0.0010	mg/Kg wet	0.0200		91.0	70-130			
2,2-Dichloropropane	0.0194	0.0020	mg/Kg wet	0.0200		97.0	70-130			V-05
1,1-Dichloropropene	0.0201	0.0020	mg/Kg wet	0.0200		100	70-130			
cis-1,3-Dichloropropene	0.0199	0.0010	mg/Kg wet	0.0200		99.4	70-130			
trans-1,3-Dichloropropene	0.0183	0.0010	mg/Kg wet	0.0200		91.5	70-130			
Diethyl Ether	0.0254	0.010	mg/Kg wet	0.0200		127	70-130			V-20
Diisopropyl Ether (DIPE)	0.0194	0.0010	mg/Kg wet	0.0200		96.8	70-130			
1,4-Dioxane	0.150	0.10	mg/Kg wet	0.200		75.2	40-160			V-16 †
1,4-Dioxane (SIM)	0.159	0.040	mg/Kg wet	0.200		79.4	40-160			V-05 †
Ethylbenzene	0.0188	0.0020	mg/Kg wet	0.0200		94.1	70-130			
Hexachlorobutadiene	0.0206	0.0020	mg/Kg wet	0.0200		103	70-130			
2-Hexanone (MBK)	0.173	0.020	mg/Kg wet	0.200		86.3	40-160			†
Isopropylbenzene (Cumene)	0.0203	0.0020	mg/Kg wet	0.0200		101	70-130			
p-Isopropyltoluene (p-Cymene)	0.0205	0.0020	mg/Kg wet	0.0200		103	70-130			
Methyl tert-Butyl Ether (MTBE)	0.0190	0.0040	mg/Kg wet	0.0200		95.1	70-130			
Methylene Chloride	0.0203	0.010	mg/Kg wet	0.0200		102	70-130			
4-Methyl-2-pentanone (MIBK)	0.178	0.020	mg/Kg wet	0.200		89.1	40-160			†
Naphthalene	0.0184	0.0040	mg/Kg wet	0.0200		91.8	70-130			
n-Propylbenzene	0.0210	0.0020	mg/Kg wet	0.0200		105	70-130			
Styrene	0.0201	0.0020	mg/Kg wet	0.0200		100	70-130			
1,1,1,2-Tetrachloroethane	0.0203	0.0020	mg/Kg wet	0.0200		102	70-130			
1,1,2,2-Tetrachloroethane	0.0183	0.0010	mg/Kg wet	0.0200		91.4	70-130			
Tetrachloroethylene	0.0214	0.0020	mg/Kg wet	0.0200		107	70-130			
Tetrahydrofuran	0.0182	0.010	mg/Kg wet	0.0200		90.9	70-130			
Toluene	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130			
1,2,3-Trichlorobenzene	0.0191	0.0020	mg/Kg wet	0.0200		95.4	70-130			
1,2,4-Trichlorobenzene	0.0196	0.0020	mg/Kg wet	0.0200		97.9	70-130			
1,1,1-Trichloroethane	0.0196	0.0020	mg/Kg wet	0.0200		97.8	70-130			
1,1,2-Trichloroethane	0.0197	0.0020	mg/Kg wet	0.0200		98.3	70-130			
Trichloroethylene	0.0201	0.0020	mg/Kg wet	0.0200		100	70-130			
Trichlorofluoromethane (Freon 11)	0.0258	0.010	mg/Kg wet	0.0200		129	70-130			
1,2,3-Trichloropropane	0.0175	0.0020	mg/Kg wet	0.0200		87.4	70-130			
1,2,4-Trimethylbenzene	0.0187	0.0020	mg/Kg wet	0.0200		93.4	70-130			
1,3,5-Trimethylbenzene	0.0191	0.0020	mg/Kg wet	0.0200		95.7	70-130			
Vinyl Chloride	0.0242	0.010	mg/Kg wet	0.0200		121	70-130			
m+p Xylene	0.0378	0.0040	mg/Kg wet	0.0400		94.5	70-130			
o-Xylene	0.0191	0.0020	mg/Kg wet	0.0200		95.5	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0478		mg/Kg wet	0.0500		95.6	70-130			
Surrogate: Toluene-d8	0.0522		mg/Kg wet	0.0500		104	70-130			
Surrogate: 4-Bromofluorobenzene	0.0498		mg/Kg wet	0.0500		99.6	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
<b>Batch B228262 - SW-846 5035</b>										
<b>LCS Dup (B228262-BSD1)</b>										
					Prepared: 04/05/19 Analyzed: 04/15/19					
Acetone	0.230	0.10	mg/Kg wet	0.200		115	40-160	1.90	20	†
tert-Amyl Methyl Ether (TAME)	0.0201	0.0010	mg/Kg wet	0.0200		100	70-130	2.11	20	
Benzene	0.0200	0.0020	mg/Kg wet	0.0200		99.8	70-130	1.01	20	
Bromobenzene	0.0187	0.0020	mg/Kg wet	0.0200		93.6	70-130	0.107	20	
Bromochloromethane	0.0209	0.0020	mg/Kg wet	0.0200		104	70-130	1.25	20	
Bromodichloromethane	0.0211	0.0020	mg/Kg wet	0.0200		106	70-130	4.05	20	
Bromoform	0.0189	0.0020	mg/Kg wet	0.0200		94.5	70-130	1.16	20	
Bromomethane	0.0226	0.010	mg/Kg wet	0.0200		113	40-160	15.4	20	V-34 †
2-Butanone (MEK)	0.165	0.040	mg/Kg wet	0.200		82.5	40-160	1.97	20	†
n-Butylbenzene	0.0209	0.0020	mg/Kg wet	0.0200		104	70-130	1.06	20	
sec-Butylbenzene	0.0217	0.0020	mg/Kg wet	0.0200		109	70-130	0.925	20	
tert-Butylbenzene	0.0213	0.0020	mg/Kg wet	0.0200		106	70-130	3.54	20	
tert-Butyl Ethyl Ether (TBEE)	0.0187	0.0010	mg/Kg wet	0.0200		93.7	70-130	4.70	20	
<b>Carbon Disulfide</b>	0.0317	0.0060	mg/Kg wet	0.0200		<b>158</b> *	70-130	0.252	20	L-02
Carbon Tetrachloride	0.0221	0.0020	mg/Kg wet	0.0200		110	70-130	2.77	20	
Chlorobenzene	0.0206	0.0020	mg/Kg wet	0.0200		103	70-130	1.47	20	
Chlorodibromomethane	0.0230	0.0010	mg/Kg wet	0.0200		115	70-130	7.86	20	
<b>Chloroethane</b>	0.0284	0.010	mg/Kg wet	0.0200		<b>142</b> *	70-130	7.60	20	L-02
Chloroform	0.0203	0.0040	mg/Kg wet	0.0200		102	70-130	0.197	20	
Chloromethane	0.0227	0.010	mg/Kg wet	0.0200		113	40-160	2.41	20	†
2-Chlorotoluene	0.0190	0.0020	mg/Kg wet	0.0200		95.0	70-130	2.34	20	
4-Chlorotoluene	0.0201	0.0020	mg/Kg wet	0.0200		100	70-130	1.91	20	
1,2-Dibromo-3-chloropropane (DBCP)	0.0165	0.0020	mg/Kg wet	0.0200		82.7	70-130	8.05	20	V-05
1,2-Dibromoethane (EDB)	0.0194	0.0010	mg/Kg wet	0.0200		96.8	70-130	1.44	20	
Dibromomethane	0.0203	0.0020	mg/Kg wet	0.0200		101	70-130	0.197	20	
1,2-Dichlorobenzene	0.0209	0.0020	mg/Kg wet	0.0200		104	70-130	1.05	20	
1,3-Dichlorobenzene	0.0223	0.0020	mg/Kg wet	0.0200		111	70-130	3.84	20	
1,4-Dichlorobenzene	0.0204	0.0020	mg/Kg wet	0.0200		102	70-130	3.09	20	
Dichlorodifluoromethane (Freon 12)	0.0199	0.010	mg/Kg wet	0.0200		99.5	40-160	5.79	20	V-05 †
1,1-Dichloroethane	0.0205	0.0020	mg/Kg wet	0.0200		103	70-130	0.873	20	
1,2-Dichloroethane	0.0199	0.0020	mg/Kg wet	0.0200		99.5	70-130	1.42	20	
<b>1,1-Dichloroethylene</b>	0.0285	0.0040	mg/Kg wet	0.0200		<b>142</b> *	70-130	0.352	20	L-02
cis-1,2-Dichloroethylene	0.0212	0.0020	mg/Kg wet	0.0200		106	70-130	0.853	20	
trans-1,2-Dichloroethylene	0.0217	0.0020	mg/Kg wet	0.0200		109	70-130	3.84	20	
1,2-Dichloropropane	0.0192	0.0020	mg/Kg wet	0.0200		96.2	70-130	0.00	20	
1,3-Dichloropropane	0.0195	0.0010	mg/Kg wet	0.0200		97.6	70-130	7.00	20	
2,2-Dichloropropane	0.0197	0.0020	mg/Kg wet	0.0200		98.3	70-130	1.33	20	V-05
1,1-Dichloropropene	0.0201	0.0020	mg/Kg wet	0.0200		101	70-130	0.299	20	
cis-1,3-Dichloropropene	0.0209	0.0010	mg/Kg wet	0.0200		104	70-130	4.91	20	
trans-1,3-Dichloropropene	0.0189	0.0010	mg/Kg wet	0.0200		94.4	70-130	3.12	20	
Diethyl Ether	0.0252	0.010	mg/Kg wet	0.0200		126	70-130	0.789	20	V-20
Diisopropyl Ether (DIPE)	0.0197	0.0010	mg/Kg wet	0.0200		98.7	70-130	1.94	20	
1,4-Dioxane	0.138	0.10	mg/Kg wet	0.200		69.0	40-160	8.68	20	L-14, V-16 †
1,4-Dioxane (SIM)	0.158	0.040	mg/Kg wet	0.200		79.2	40-160	0.202	20	V-05 † ‡
Ethylbenzene	0.0198	0.0020	mg/Kg wet	0.0200		98.9	70-130	4.97	20	
Hexachlorobutadiene	0.0205	0.0020	mg/Kg wet	0.0200		102	70-130	0.488	20	
2-Hexanone (MBK)	0.166	0.020	mg/Kg wet	0.200		83.2	40-160	3.61	20	†
Isopropylbenzene (Cumene)	0.0211	0.0020	mg/Kg wet	0.0200		106	70-130	4.06	20	
p-Isopropyltoluene (p-Cymene)	0.0211	0.0020	mg/Kg wet	0.0200		106	70-130	2.88	20	
Methyl tert-Butyl Ether (MTBE)	0.0189	0.0040	mg/Kg wet	0.0200		94.6	70-130	0.527	20	
Methylene Chloride	0.0203	0.010	mg/Kg wet	0.0200		101	70-130	0.295	20	
4-Methyl-2-pentanone (MIBK)	0.175	0.020	mg/Kg wet	0.200		87.4	40-160	1.90	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
<b>Batch B228262 - SW-846 5035</b>										
<b>LCS Dup (B228262-BSD1)</b>										
					Prepared: 04/05/19 Analyzed: 04/15/19					
Naphthalene	0.0178	0.0040	mg/Kg wet	0.0200		88.9	70-130	3.21	20	
n-Propylbenzene	0.0212	0.0020	mg/Kg wet	0.0200		106	70-130	1.14	20	
Styrene	0.0204	0.0020	mg/Kg wet	0.0200		102	70-130	1.58	20	
1,1,1,2-Tetrachloroethane	0.0220	0.0020	mg/Kg wet	0.0200		110	70-130	8.02	20	
1,1,2,2-Tetrachloroethane	0.0174	0.0010	mg/Kg wet	0.0200		87.2	70-130	4.70	20	
Tetrachloroethylene	0.0229	0.0020	mg/Kg wet	0.0200		114	70-130	6.69	20	
Tetrahydrofuran	0.0177	0.010	mg/Kg wet	0.0200		88.4	70-130	2.79	20	
Toluene	0.0204	0.0020	mg/Kg wet	0.0200		102	70-130	1.38	20	
1,2,3-Trichlorobenzene	0.0182	0.0020	mg/Kg wet	0.0200		91.1	70-130	4.61	20	
1,2,4-Trichlorobenzene	0.0193	0.0020	mg/Kg wet	0.0200		96.6	70-130	1.34	20	
1,1,1-Trichloroethane	0.0213	0.0020	mg/Kg wet	0.0200		106	70-130	8.42	20	
1,1,2-Trichloroethane	0.0188	0.0020	mg/Kg wet	0.0200		94.2	70-130	4.26	20	
Trichloroethylene	0.0208	0.0020	mg/Kg wet	0.0200		104	70-130	3.62	20	
<b>Trichlorofluoromethane (Freon 11)</b>	0.0269	0.010	mg/Kg wet	0.0200		<b>134</b>	<b>*</b> 70-130	4.25	20	L-07
1,2,3-Trichloropropane	0.0177	0.0020	mg/Kg wet	0.0200		88.4	70-130	1.14	20	
1,2,4-Trimethylbenzene	0.0188	0.0020	mg/Kg wet	0.0200		94.0	70-130	0.640	20	
1,3,5-Trimethylbenzene	0.0199	0.0020	mg/Kg wet	0.0200		99.3	70-130	3.69	20	
Vinyl Chloride	0.0243	0.010	mg/Kg wet	0.0200		122	70-130	0.577	20	
m+p Xylene	0.0388	0.0040	mg/Kg wet	0.0400		97.1	70-130	2.71	20	
o-Xylene	0.0198	0.0020	mg/Kg wet	0.0200		99.2	70-130	3.80	20	
Surrogate: 1,2-Dichloroethane-d4	0.0495		mg/Kg wet	0.0500		99.1	70-130			
Surrogate: Toluene-d8	0.0521		mg/Kg wet	0.0500		104	70-130			
Surrogate: 4-Bromofluorobenzene	0.0501		mg/Kg wet	0.0500		100	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
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**Batch B228235 - SW-846 3546**

**Blank (B228235-BLK1)**

Prepared: 04/15/19 Analyzed: 04/16/19

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							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							
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							
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							
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							
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							
2,4-Dinitrophenol	ND	0.66	mg/Kg wet							
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							
1,2-Diphenylhydrazine/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							

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 B228235 - SW-846 3546

Blank (B228235-BLK1)

Prepared: 04/15/19 Analyzed: 04/16/19

Phenol	ND	0.34	mg/Kg wet							
Pyrene	ND	0.17	mg/Kg wet							
Pyridine	ND	0.34	mg/Kg wet							
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	5.69		mg/Kg wet	6.67		85.3	30-130			
Surrogate: Phenol-d6	6.07		mg/Kg wet	6.67		91.0	30-130			
Surrogate: Nitrobenzene-d5	2.95		mg/Kg wet	3.33		88.4	30-130			
Surrogate: 2-Fluorobiphenyl	2.88		mg/Kg wet	3.33		86.5	30-130			
Surrogate: 2,4,6-Tribromophenol	6.37		mg/Kg wet	6.67		95.5	30-130			
Surrogate: p-Terphenyl-d14	3.35		mg/Kg wet	3.33		101	30-130			

LCS (B228235-BS1)

Prepared: 04/15/19 Analyzed: 04/16/19

Acenaphthene	1.31	0.17	mg/Kg wet	1.67		78.8	40-140			
Acenaphthylene	1.43	0.17	mg/Kg wet	1.67		85.7	40-140			
Acetophenone	1.23	0.34	mg/Kg wet	1.67		73.6	40-140			
Aniline	0.884	0.34	mg/Kg wet	1.67		53.1	40-140			V-34
Anthracene	1.51	0.17	mg/Kg wet	1.67		90.4	40-140			
Benzo(a)anthracene	1.55	0.17	mg/Kg wet	1.67		92.9	40-140			
Benzo(a)pyrene	1.55	0.17	mg/Kg wet	1.67		93.0	40-140			
Benzo(b)fluoranthene	1.44	0.17	mg/Kg wet	1.67		86.2	40-140			
Benzo(g,h,i)perylene	1.63	0.17	mg/Kg wet	1.67		97.9	40-140			
Benzo(k)fluoranthene	1.47	0.17	mg/Kg wet	1.67		88.1	40-140			
Bis(2-chloroethoxy)methane	1.68	0.34	mg/Kg wet	1.67		101	40-140			
Bis(2-chloroethyl)ether	1.32	0.34	mg/Kg wet	1.67		79.3	40-140			
Bis(2-chloroisopropyl)ether	1.37	0.34	mg/Kg wet	1.67		82.4	40-140			
Bis(2-Ethylhexyl)phthalate	1.61	0.34	mg/Kg wet	1.67		96.8	40-140			
4-Bromophenylphenylether	1.55	0.34	mg/Kg wet	1.67		93.3	40-140			
Butylbenzylphthalate	1.62	0.34	mg/Kg wet	1.67		97.4	40-140			
4-Chloroaniline	0.856	0.66	mg/Kg wet	1.67		51.4	15-140			V-34 †
2-Chloronaphthalene	1.32	0.34	mg/Kg wet	1.67		78.9	40-140			
2-Chlorophenol	1.37	0.34	mg/Kg wet	1.67		82.3	30-130			
Chrysene	1.54	0.17	mg/Kg wet	1.67		92.3	40-140			
Dibenz(a,h)anthracene	1.62	0.17	mg/Kg wet	1.67		97.1	40-140			
Dibenzofuran	1.42	0.34	mg/Kg wet	1.67		85.2	40-140			
Di-n-butylphthalate	1.55	0.34	mg/Kg wet	1.67		93.3	40-140			
1,2-Dichlorobenzene	1.11	0.34	mg/Kg wet	1.67		66.8	40-140			
1,3-Dichlorobenzene	1.09	0.34	mg/Kg wet	1.67		65.3	40-140			
1,4-Dichlorobenzene	1.10	0.34	mg/Kg wet	1.67		65.8	40-140			
3,3-Dichlorobenzidine	1.13	0.17	mg/Kg wet	1.67		67.6	40-140			
2,4-Dichlorophenol	1.47	0.34	mg/Kg wet	1.67		88.0	30-130			
Diethylphthalate	1.46	0.34	mg/Kg wet	1.67		87.4	40-140			
2,4-Dimethylphenol	1.49	0.34	mg/Kg wet	1.67		89.4	30-130			
Dimethylphthalate	1.45	0.34	mg/Kg wet	1.67		86.8	40-140			
2,4-Dinitrophenol	1.04	0.66	mg/Kg wet	1.67		62.6	15-140			†
2,4-Dinitrotoluene	1.41	0.34	mg/Kg wet	1.67		84.4	40-140			
2,6-Dinitrotoluene	1.51	0.34	mg/Kg wet	1.67		90.4	40-140			
Di-n-octylphthalate	1.53	0.34	mg/Kg wet	1.67		91.9	40-140			
1,2-Diphenylhydrazine/Azobenzene	1.58	0.34	mg/Kg wet	1.67		94.7	40-140			
Fluoranthene	1.49	0.17	mg/Kg wet	1.67		89.4	40-140			
Fluorene	1.41	0.17	mg/Kg wet	1.67		84.5	40-140			

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 B228235 - SW-846 3546

LCS (B228235-BS1)

Prepared: 04/15/19 Analyzed: 04/16/19

Hexachlorobenzene	1.47	0.34	mg/Kg wet	1.67		88.2	40-140			
Hexachlorobutadiene	1.13	0.34	mg/Kg wet	1.67		67.7	40-140			
Hexachloroethane	1.09	0.34	mg/Kg wet	1.67		65.4	40-140			
Indeno(1,2,3-cd)pyrene	1.66	0.17	mg/Kg wet	1.67		99.6	40-140			
Isophorone	1.44	0.34	mg/Kg wet	1.67		86.1	40-140			
2-Methylnaphthalene	1.34	0.17	mg/Kg wet	1.67		80.4	40-140			
2-Methylphenol	1.38	0.34	mg/Kg wet	1.67		82.8	30-130			
3/4-Methylphenol	1.32	0.34	mg/Kg wet	1.67		79.1	30-130			
Naphthalene	1.28	0.17	mg/Kg wet	1.67		76.5	40-140			
Nitrobenzene	1.28	0.34	mg/Kg wet	1.67		76.6	40-140			
2-Nitrophenol	1.35	0.34	mg/Kg wet	1.67		80.9	30-130			
4-Nitrophenol	1.41	0.66	mg/Kg wet	1.67		84.8	15-140			†
Pentachlorophenol	1.26	0.34	mg/Kg wet	1.67		75.4	30-130			
Phenanthrene	1.51	0.17	mg/Kg wet	1.67		90.5	40-140			
Phenol	1.49	0.34	mg/Kg wet	1.67		89.4	15-140			†
Pyrene	1.55	0.17	mg/Kg wet	1.67		92.7	40-140			
Pyridine	0.826	0.34	mg/Kg wet	1.67		49.6	30-140			†
1,2,4-Trichlorobenzene	1.17	0.34	mg/Kg wet	1.67		70.3	40-140			
2,4,5-Trichlorophenol	1.51	0.34	mg/Kg wet	1.67		90.8	30-130			
2,4,6-Trichlorophenol	1.51	0.34	mg/Kg wet	1.67		90.5	30-130			
Surrogate: 2-Fluorophenol	5.32		mg/Kg wet	6.67		79.9	30-130			
Surrogate: Phenol-d6	5.95		mg/Kg wet	6.67		89.2	30-130			
Surrogate: Nitrobenzene-d5	2.79		mg/Kg wet	3.33		83.6	30-130			
Surrogate: 2-Fluorobiphenyl	3.03		mg/Kg wet	3.33		91.0	30-130			
Surrogate: 2,4,6-Tribromophenol	6.58		mg/Kg wet	6.67		98.7	30-130			
Surrogate: p-Terphenyl-d14	3.29		mg/Kg wet	3.33		98.6	30-130			

LCS Dup (B228235-BS1)

Prepared: 04/15/19 Analyzed: 04/16/19

Acenaphthene	1.35	0.17	mg/Kg wet	1.67		80.9	40-140	2.55	30	
Acenaphthylene	1.47	0.17	mg/Kg wet	1.67		87.9	40-140	2.58	30	
Acetophenone	1.21	0.34	mg/Kg wet	1.67		72.7	40-140	1.23	30	
Aniline	0.880	0.34	mg/Kg wet	1.67		52.8	40-140	0.453	30	V-34
Anthracene	1.49	0.17	mg/Kg wet	1.67		89.4	40-140	1.11	30	
Benzo(a)anthracene	1.55	0.17	mg/Kg wet	1.67		92.8	40-140	0.151	30	
Benzo(a)pyrene	1.56	0.17	mg/Kg wet	1.67		93.7	40-140	0.729	30	
Benzo(b)fluoranthene	1.44	0.17	mg/Kg wet	1.67		86.4	40-140	0.185	30	
Benzo(g,h,i)perylene	1.60	0.17	mg/Kg wet	1.67		95.8	40-140	2.09	30	
Benzo(k)fluoranthene	1.46	0.17	mg/Kg wet	1.67		87.3	40-140	0.889	30	
Bis(2-chloroethoxy)methane	1.69	0.34	mg/Kg wet	1.67		101	40-140	0.653	30	
Bis(2-chloroethyl)ether	1.27	0.34	mg/Kg wet	1.67		76.3	40-140	3.96	30	
Bis(2-chloroisopropyl)ether	1.33	0.34	mg/Kg wet	1.67		79.6	40-140	3.53	30	
Bis(2-Ethylhexyl)phthalate	1.64	0.34	mg/Kg wet	1.67		98.7	40-140	1.99	30	
4-Bromophenylphenylether	1.54	0.34	mg/Kg wet	1.67		92.3	40-140	1.03	30	
Butylbenzylphthalate	1.64	0.34	mg/Kg wet	1.67		98.1	40-140	0.757	30	
4-Chloroaniline	0.874	0.66	mg/Kg wet	1.67		52.4	15-140	2.00	30	V-34 †
2-Chloronaphthalene	1.32	0.34	mg/Kg wet	1.67		78.9	40-140	0.0254	30	
2-Chlorophenol	1.33	0.34	mg/Kg wet	1.67		79.8	30-130	3.11	30	
Chrysene	1.55	0.17	mg/Kg wet	1.67		92.8	40-140	0.605	30	
Dibenz(a,h)anthracene	1.61	0.17	mg/Kg wet	1.67		96.5	40-140	0.620	30	
Dibenzofuran	1.44	0.34	mg/Kg wet	1.67		86.4	40-140	1.38	30	
Di-n-butylphthalate	1.54	0.34	mg/Kg wet	1.67		92.1	40-140	1.23	30	
1,2-Dichlorobenzene	1.10	0.34	mg/Kg wet	1.67		65.9	40-140	1.33	30	

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

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
<b>Batch B228235 - SW-846 3546</b>										
<b>LCS Dup (B228235-BSD1)</b>										
					Prepared: 04/15/19 Analyzed: 04/16/19					
1,3-Dichlorobenzene	1.08	0.34	mg/Kg wet	1.67		64.5	40-140	1.20	30	
1,4-Dichlorobenzene	1.06	0.34	mg/Kg wet	1.67		63.7	40-140	3.24	30	
3,3-Dichlorobenzidine	1.10	0.17	mg/Kg wet	1.67		66.2	40-140	2.12	30	
2,4-Dichlorophenol	1.48	0.34	mg/Kg wet	1.67		88.9	30-130	0.927	30	
Diethylphthalate	1.48	0.34	mg/Kg wet	1.67		88.7	40-140	1.50	30	
2,4-Dimethylphenol	1.50	0.34	mg/Kg wet	1.67		90.1	30-130	0.869	30	
Dimethylphthalate	1.49	0.34	mg/Kg wet	1.67		89.6	40-140	3.20	30	
2,4-Dinitrophenol	1.06	0.66	mg/Kg wet	1.67		63.5	15-140	1.52	30	†
2,4-Dinitrotoluene	1.40	0.34	mg/Kg wet	1.67		84.3	40-140	0.166	30	
2,6-Dinitrotoluene	1.51	0.34	mg/Kg wet	1.67		90.7	40-140	0.265	30	
Di-n-octylphthalate	1.53	0.34	mg/Kg wet	1.67		91.6	40-140	0.283	30	
1,2-Diphenylhydrazine/Azobenzene	1.57	0.34	mg/Kg wet	1.67		94.3	40-140	0.466	30	
Fluoranthene	1.49	0.17	mg/Kg wet	1.67		89.6	40-140	0.201	30	
Fluorene	1.45	0.17	mg/Kg wet	1.67		86.8	40-140	2.76	30	
Hexachlorobenzene	1.48	0.34	mg/Kg wet	1.67		88.8	40-140	0.723	30	
Hexachlorobutadiene	1.10	0.34	mg/Kg wet	1.67		66.2	40-140	2.18	30	
Hexachloroethane	1.06	0.34	mg/Kg wet	1.67		63.8	40-140	2.45	30	
Indeno(1,2,3-cd)pyrene	1.63	0.17	mg/Kg wet	1.67		97.7	40-140	1.91	30	
Isophorone	1.44	0.34	mg/Kg wet	1.67		86.4	40-140	0.325	30	
2-Methylnaphthalene	1.33	0.17	mg/Kg wet	1.67		79.9	40-140	0.599	30	
2-Methylphenol	1.37	0.34	mg/Kg wet	1.67		82.0	30-130	0.922	30	
3/4-Methylphenol	1.34	0.34	mg/Kg wet	1.67		80.3	30-130	1.50	30	
Naphthalene	1.25	0.17	mg/Kg wet	1.67		75.3	40-140	1.63	30	
Nitrobenzene	1.27	0.34	mg/Kg wet	1.67		76.0	40-140	0.865	30	
2-Nitrophenol	1.34	0.34	mg/Kg wet	1.67		80.4	30-130	0.645	30	
4-Nitrophenol	1.46	0.66	mg/Kg wet	1.67		87.6	15-140	3.29	30	†
Pentachlorophenol	1.29	0.34	mg/Kg wet	1.67		77.2	30-130	2.41	30	
Phenanthrene	1.50	0.17	mg/Kg wet	1.67		90.2	40-140	0.288	30	
Phenol	1.50	0.34	mg/Kg wet	1.67		90.0	15-140	0.647	30	†
Pyrene	1.54	0.17	mg/Kg wet	1.67		92.2	40-140	0.627	30	
Pyridine	0.824	0.34	mg/Kg wet	1.67		49.4	30-140	0.242	30	†
1,2,4-Trichlorobenzene	1.15	0.34	mg/Kg wet	1.67		69.1	40-140	1.75	30	
2,4,5-Trichlorophenol	1.49	0.34	mg/Kg wet	1.67		89.5	30-130	1.38	30	
2,4,6-Trichlorophenol	1.56	0.34	mg/Kg wet	1.67		93.3	30-130	3.05	30	
Surrogate: 2-Fluorophenol	5.16		mg/Kg wet	6.67		77.5	30-130			
Surrogate: Phenol-d6	5.90		mg/Kg wet	6.67		88.5	30-130			
Surrogate: Nitrobenzene-d5	2.74		mg/Kg wet	3.33		82.3	30-130			
Surrogate: 2-Fluorobiphenyl	3.06		mg/Kg wet	3.33		91.8	30-130			
Surrogate: 2,4,6-Tribromophenol	6.66		mg/Kg wet	6.67		99.9	30-130			
Surrogate: p-Terphenyl-d14	3.22		mg/Kg wet	3.33		96.7	30-130			



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**QUALITY CONTROL**

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B228231 - SW-846 3540C**

**Blank (B228231-BLK1)**

Prepared: 04/15/19 Analyzed: 04/16/19

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	0.188		mg/Kg wet	0.200		94.1	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.193		mg/Kg wet	0.200		96.6	30-150			
Surrogate: Tetrachloro-m-xylene	0.180		mg/Kg wet	0.200		90.0	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.196		mg/Kg wet	0.200		98.1	30-150			

**LCS (B228231-BS1)**

Prepared: 04/15/19 Analyzed: 04/16/19

Aroclor-1016	0.17	0.020	mg/Kg wet	0.200		84.1	40-140			
Aroclor-1016 [2C]	0.17	0.020	mg/Kg wet	0.200		82.6	40-140			
Aroclor-1260	0.16	0.020	mg/Kg wet	0.200		78.2	40-140			
Aroclor-1260 [2C]	0.16	0.020	mg/Kg wet	0.200		79.5	40-140			
Surrogate: Decachlorobiphenyl	0.175		mg/Kg wet	0.200		87.3	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.181		mg/Kg wet	0.200		90.7	30-150			
Surrogate: Tetrachloro-m-xylene	0.169		mg/Kg wet	0.200		84.7	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.184		mg/Kg wet	0.200		91.9	30-150			

**LCS Dup (B228231-BSD1)**

Prepared: 04/15/19 Analyzed: 04/16/19

Aroclor-1016	0.20	0.020	mg/Kg wet	0.200		98.7	40-140	16.0	30	
Aroclor-1016 [2C]	0.20	0.020	mg/Kg wet	0.200		100	40-140	19.5	30	
Aroclor-1260	0.19	0.020	mg/Kg wet	0.200		93.2	40-140	17.5	30	
Aroclor-1260 [2C]	0.19	0.020	mg/Kg wet	0.200		92.5	40-140	15.1	30	
Surrogate: Decachlorobiphenyl	0.209		mg/Kg wet	0.200		105	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.214		mg/Kg wet	0.200		107	30-150			
Surrogate: Tetrachloro-m-xylene	0.200		mg/Kg wet	0.200		100	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.217		mg/Kg wet	0.200		108	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
<b>Batch B228233 - SW-846 3546</b>										
<b>Blank (B228233-BLK1)</b>										
Prepared: 04/15/19 Analyzed: 04/17/19										
TPH (C9-C36)	ND	8.3	mg/Kg wet							
Surrogate: 2-Fluorobiphenyl	1.95		mg/Kg wet	3.33		58.5	40-140			
<b>LCS (B228233-BS1)</b>										
Prepared: 04/15/19 Analyzed: 04/17/19										
TPH (C9-C36)	29.3	8.3	mg/Kg wet	33.3		87.8	40-140			
Surrogate: 2-Fluorobiphenyl	2.62		mg/Kg wet	3.33		78.6	40-140			
<b>LCS Dup (B228233-BSD1)</b>										
Prepared: 04/15/19 Analyzed: 04/17/19										
TPH (C9-C36)	28.8	8.3	mg/Kg wet	33.3		86.5	40-140	1.46	30	
Surrogate: 2-Fluorobiphenyl	2.77		mg/Kg wet	3.33		83.1	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
<b>Batch B228326 - SW-846 7471</b>										
<b>Blank (B228326-BLK1)</b> Prepared: 04/18/19 Analyzed: 04/19/19										
Mercury	ND	0.025	mg/Kg wet							
<b>LCS (B228326-BS1)</b> Prepared: 04/18/19 Analyzed: 04/19/19										
Mercury	4.19	0.37	mg/Kg wet	3.71		113	65-135			
<b>LCS Dup (B228326-BSD1)</b> Prepared: 04/18/19 Analyzed: 04/19/19										
Mercury	3.76	0.38	mg/Kg wet	3.71		101	65-135	10.7	30	
<b>Batch B228464 - SW-846 3050B</b>										
<b>Blank (B228464-BLK1)</b> Prepared: 04/17/19 Analyzed: 04/18/19										
Antimony	ND	1.7	mg/Kg wet							
Arsenic	ND	1.7	mg/Kg wet							
Barium	ND	1.7	mg/Kg wet							
Beryllium	ND	0.17	mg/Kg wet							
Cadmium	ND	0.17	mg/Kg wet							
Chromium	ND	0.33	mg/Kg wet							
Copper	ND	0.33	mg/Kg wet							
Lead	ND	0.50	mg/Kg wet							
Nickel	ND	0.33	mg/Kg wet							
Selenium	ND	3.3	mg/Kg wet							
Silver	ND	0.33	mg/Kg wet							
Thallium	ND	1.7	mg/Kg wet							
Vanadium	ND	0.67	mg/Kg wet							
Zinc	ND	0.67	mg/Kg wet							
<b>LCS (B228464-BS1)</b> Prepared: 04/17/19 Analyzed: 04/18/19										
Antimony	69.0	5.0	mg/Kg wet	89.6		77.1	3.3-196.4			
Arsenic	180	5.0	mg/Kg wet	202		89.2	82.7-117.3			
Barium	269	5.0	mg/Kg wet	270		99.8	82.6-117.8			
Beryllium	92.7	0.50	mg/Kg wet	96.8		95.8	83.4-116.7			
Cadmium	132	0.50	mg/Kg wet	141		93.7	83-117			
Chromium	159	1.0	mg/Kg wet	167		94.9	81.4-118			
Copper	106	1.0	mg/Kg wet	108		98.2	83.4-115.7			
Lead	69.2	1.5	mg/Kg wet	73.8		93.8	82.9-117.1			
Nickel	87.0	1.0	mg/Kg wet	89.4		97.3	82.9-117.5			
Selenium	39.8	10	mg/Kg wet	49.9		79.8	79.2-120.6			
Silver	68.6	1.0	mg/Kg wet	71.1		96.4	79.7-120.1			
Thallium	64.1	5.0	mg/Kg wet	58.5		110	80.7-119.5			
Vanadium	53.2	2.0	mg/Kg wet	58.2		91.5	79-121			
Zinc	246	2.0	mg/Kg wet	264		93.3	80.7-119.3			

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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
<b>Batch B228464 - SW-846 3050B</b>										
<b>LCS Dup (B228464-BSD1)</b>										
					Prepared: 04/17/19 Analyzed: 04/18/19					
Antimony	70.6	4.8	mg/Kg wet	89.6		78.8	3.3-196.4	2.19	30	
Arsenic	184	4.8	mg/Kg wet	202		91.1	82.7-117.3	2.03	30	
Barium	271	4.8	mg/Kg wet	270		100	82.6-117.8	0.550	30	
Beryllium	95.0	0.48	mg/Kg wet	96.8		98.1	83.4-116.7	2.40	30	
Cadmium	136	0.48	mg/Kg wet	141		96.3	83-117	2.69	30	
Chromium	161	0.96	mg/Kg wet	167		96.5	81.4-118	1.67	30	
Copper	108	0.96	mg/Kg wet	108		100	83.4-115.7	1.85	30	
Lead	68.8	1.4	mg/Kg wet	73.8		93.2	82.9-117.1	0.648	30	
Nickel	89.3	0.96	mg/Kg wet	89.4		99.9	82.9-117.5	2.60	30	
Silver	70.9	0.96	mg/Kg wet	71.1		99.7	79.7-120.1	3.33	30	
Thallium	65.8	4.8	mg/Kg wet	58.5		112	80.7-119.5	2.63	30	
Vanadium	53.9	1.9	mg/Kg wet	58.2		92.7	79-121	1.32	30	
Zinc	253	1.9	mg/Kg wet	264		95.8	80.7-119.3	2.71	30	
<b>MRL Check (B228464-MRL1)</b>										
					Prepared: 04/17/19 Analyzed: 04/18/19					
Lead	0.476	0.49	mg/Kg wet	0.489		97.2	80-120			

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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
<b>Batch B228169 - SW-846 9045C</b>										
<b>LCS (B228169-BS1)</b>				Prepared & Analyzed: 04/13/19						
pH	5.95		pH Units	6.00		99.2	90-110			
<b>Batch B228496 - SW-846 9014</b>										
<b>Blank (B228496-BLK1)</b>				Prepared: 04/17/19 Analyzed: 04/18/19						
Reactive Cyanide	ND	0.40	mg/Kg							
<b>LCS (B228496-BS1)</b>				Prepared: 04/17/19 Analyzed: 04/18/19						
Reactive Cyanide	9.7	0.40	mg/Kg	10.0		96.9	83.6-111			
<b>Batch B228498 - SW-846 9030A</b>										
<b>Blank (B228498-BLK1)</b>				Prepared: 04/17/19 Analyzed: 04/18/19						
Reactive Sulfide	ND	2.0	mg/Kg							
<b>LCS (B228498-BS1)</b>				Prepared: 04/17/19 Analyzed: 04/18/19						
Reactive Sulfide	14	2.0	mg/Kg	14.8		97.3	54.9-121			
<b>Batch B228560 - SM21-22 2510B Modified</b>										
<b>Blank (B228560-BLK1)</b>				Prepared & Analyzed: 04/18/19						
Specific conductance	ND	2.0	µmhos/cm							
<b>LCS (B228560-BS1)</b>				Prepared & Analyzed: 04/18/19						
Specific conductance	190		µmhos/cm	192		101	90-110			

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

**QUALITY CONTROL**

**TCLP - Metals Analyses - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B228378 - SW-846 3010A</b>										
<b>Blank (B228378-BLK1)</b>				Prepared: 04/16/19 Analyzed: 04/17/19						
Lead	ND	0.010	mg/L							
<b>LCS (B228378-BS1)</b>				Prepared: 04/16/19 Analyzed: 04/17/19						
Lead	0.517	0.010	mg/L	0.500		103	80-120			
<b>LCS Dup (B228378-BSD1)</b>				Prepared: 04/16/19 Analyzed: 04/17/19						
Lead	0.511	0.010	mg/L	0.500		102	80-120	1.14	20	
<b>Matrix Spike (B228378-MS1)</b>				<b>Source: 19D0736-01</b> Prepared: 04/16/19 Analyzed: 04/17/19						
Lead	183	0.010	mg/L	0.500	180	<b>696</b> *	75-125			MS-19

**IDENTIFICATION SUMMARY  
FOR SINGLE COMPONENT ANALYTES**

LCS

*SW-846 8082A*

Lab Sample ID:           B228231-BS1                                Date(s) Analyzed:           04/16/2019                     04/16/2019          

Instrument ID (1):           ECD 9                                                Instrument ID (2):           ECD 9          

GC Column (1):                                      ID:                                      (mm)                      GC Column (2):                                      ID:                                      (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.17	
	2	0.000	-0.030	0.030	0.17	0.0
Aroclor-1260	1	0.000	-0.030	0.030	0.16	
	2	0.000	-0.030	0.030	0.16	0.0

**IDENTIFICATION SUMMARY  
FOR SINGLE COMPONENT ANALYTES**

LCS Dup

*SW-846 8082A*

Lab Sample ID:                   B228231-BSD1                                        Date(s) Analyzed:           04/16/2019                     04/16/2019          

Instrument ID (1):                   ECD 9                                        Instrument ID (2):                   ECD 9                  

GC Column (1):                      ID:                      (mm)                      GC Column (2):                      ID:                      (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.20	
	2	0.000	-0.030	0.030	0.20	0.0
Aroclor-1260	1	0.000	-0.030	0.030	0.19	
	2	0.000	-0.030	0.030	0.19	0.0



**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.
H-03	Sample received after recommended holding time was exceeded.
L-02	Laboratory fortified blank/laboratory control sample recovery and duplicate recoveries outside of control limits. Data validation is not affected since all results are "not detected" for associated samples in this batch and bias is on the high 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.
MS-19	Sample to spike ratio is greater than or equal to 4:1. Spiked amount is not representative of the native amount in the sample. Appropriate or meaningful recoveries cannot be calculated.
O-32	A dilution was performed as part of the standard analytical procedure.
V-05	Continuing calibration verification (CCV) did not meet method specifications and was biased on the low side for this compound.
V-06	Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side for this compound.
V-16	Response factor is less than method specified minimum acceptable value. Reduced precision and accuracy may be associated with reported result.
V-20	Continuing calibration verification (CCV) 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.

**CERTIFICATIONS**

**Certified Analyses included in this Report**

Analyte	Certifications
<b>SW-846 1030 in Soil</b>	
Ignitability	NY,NH,CT,NC,ME,VA
<b>SW-846 6010D in Soil</b>	
Antimony	CT,NH,NY,ME,VA,NC
Arsenic	CT,NH,NY,ME,VA,NC
Barium	CT,NH,NY,ME,VA,NC
Beryllium	CT,NH,NY,ME,VA,NC
Cadmium	CT,NH,NY,ME,VA,NC
Chromium	CT,NH,NY,ME,VA,NC
Copper	CT,NH,NY,ME,VA,NC
Lead	CT,NH,NY,AIHA,ME,VA,NC
Nickel	CT,NH,NY,ME,VA,NC
Selenium	CT,NH,NY,ME,VA,NC
Silver	CT,NH,NY,ME,VA,NC
Thallium	CT,NH,NY,ME,VA,NC
Vanadium	CT,NH,NY,ME,VA,NC
Zinc	CT,NH,NY,ME,VA,NC
<b>SW-846 6010D in Water</b>	
Lead	NY,CT,ME,NC,NH,VA
<b>SW-846 7471B in Soil</b>	
Mercury	CT,NH,NY,NC,ME,VA
<b>SW-846 8082A in Soil</b>	
Aroclor-1016	CT,NH,NY,ME,NC,VA
Aroclor-1016 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1221	CT,NH,NY,ME,NC,VA
Aroclor-1221 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1232	CT,NH,NY,ME,NC,VA
Aroclor-1232 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1242	CT,NH,NY,ME,NC,VA
Aroclor-1242 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1248	CT,NH,NY,ME,NC,VA
Aroclor-1248 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1254	CT,NH,NY,ME,NC,VA
Aroclor-1254 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1260	CT,NH,NY,ME,NC,VA
Aroclor-1260 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1262	NY,NC,VA
Aroclor-1262 [2C]	NY,NC,VA
Aroclor-1268	NY,NC,VA
Aroclor-1268 [2C]	NY,NC,VA
<b>SW-846 8260C in Soil</b>	
Acetone	CT,NH,NY,ME
Benzene	CT,NH,NY,ME
Bromobenzene	NH,NY,ME
Bromochloromethane	NH,NY,ME
Bromodichloromethane	CT,NH,NY,ME

## CERTIFICATIONS

## Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8260C in Soil</i>	
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
1,2-Dibromo-3-chloropropane (DBCP)	NY
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
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

**CERTIFICATIONS**

**Certified Analyses included in this Report**

Analyte	Certifications
<b>SW-846 8260C in Soil</b>	
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
<b>SW-846 8270D in Soil</b>	
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
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

**CERTIFICATIONS**

**Certified Analyses included in this Report**

Analyte	Certifications
<b>SW-846 8270D in Soil</b>	
2,4-Dinitrotoluene	CT,NY,NH
2,6-Dinitrotoluene	CT,NY,NH
Di-n-octylphthalate	CT,NY,NH
1,2-Diphenylhydrazine/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
2,4,5-Trichlorophenol	CT,NY,NH
2,4,6-Trichlorophenol	CT,NY,NH
<b>SW-846 8270D in Water</b>	
Acenaphthene	CT,NY,NH
Acenaphthylene	CT,NY,NH
Acetophenone	NY
Aniline	CT,NY
Anthracene	CT,NY,NH
Benzo(a)anthracene	CT,NY,NH
Benzo(a)pyrene	CT,NY,NH
Benzo(b)fluoranthene	CT,NY,NH
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

**CERTIFICATIONS**


**Certified Analyses included in this Report**

Analyte	Certifications
<i>SW-846 8270D in Water</i>	
Dibenz(a,h)anthracene	CT,NY,NH
Dibenzofuran	CT,NY,NH
Di-n-butylphthalate	CT,NY,NH
1,2-Dichlorobenzene	CT,NY,NH
1,3-Dichlorobenzene	CT,NY,NH
1,4-Dichlorobenzene	CT,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/Azobenzene	NY
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
2,4,5-Trichlorophenol	CT,NY,NH
2,4,6-Trichlorophenol	CT,NY,NH

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

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

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2005	100033	03/1/2020
MA	Massachusetts DEP	M-MA100	06/30/2019
CT	Connecticut Department of Public Health	PH-0567	09/30/2019
NY	New York State Department of Health	10899 NELAP	04/1/2020
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2020
RI	Rhode Island Department of Health	LAO00112	12/30/2019
NC	North Carolina Div. of Water Quality	652	12/31/2019
NJ	New Jersey DEP	MA007 NELAP	06/30/2019
FL	Florida Department of Health	E871027 NELAP	06/30/2019
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2019
ME	State of Maine	2011028	06/9/2019
VA	Commonwealth of Virginia	460217	12/14/2019
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2019
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2019
NC-DW	North Carolina Department of Health	25703	07/31/2019


  
 con-test ANALYTICAL LABORATORY  
 JCH  
 Vertex  
 Address: 100N Washington St, Boston MA  
 Phone: 617-275-5107  
 Project Location: River Edge  
 Project Number: 46047  
 Project Manager: K. Sarson  
 Con-Test Quote Name/Number: K. Sarson  
 Invoice Recipient: K. Sarson  
 Sampled By: K. Sarson  
 Phone: 413-525-2332 190736  
 Fax: 413-525-6405  
 Email: info@contestlabs.com  
 http://www.contestlabs.com  
 CHAIN OF CUSTODY RECORD  
 39 Spruce Street  
 East Longmeadow, MA 01028  
 Doc # 381 Rev 1\_03242017  
 Page 1 of 1

7-Day  10-Day   
 Due Date: 5-Day   
 1-Day  3-Day   
 2-Day  4-Day   
 Format: PDF  EXCEL   
 Other: GOD  
 CLP Like Data Pkg Required:   
 Email To: K.Sarson@vertex.com  
 Fax To #:

Con-Test Work Order #	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	Composite	Grab	Matrix Code	Conc Code
1	V-201	4/19/19	1330		X	S	H
2	V-202		1335		X		
3	V-203		1340		X		
4	V-204		1345		X		
5	V-205		1350		X		
6	V-206		1355		X		
7	Fring Range	4/19/19	1400	X			

# of Containers	Preservation Code	Container Code	Field Filtered	Lab to Filter
1			<input type="checkbox"/>	<input type="checkbox"/>
2			<input type="checkbox"/>	<input type="checkbox"/>
3			<input type="checkbox"/>	<input type="checkbox"/>

Matrix Codes:	Preservation Codes:	Container Codes:
GW = Ground Water WW = Waste Water DW = Drinking Water A = Air S = Soil SL = Sludge SOL = Solid O = Other (please define)	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)	A = Amber Glass G = Glass P = Plastic ST = Sterile V = Vial S = Summa Canister T = Tedlar Bag O = Other (please define)

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

Special Requirements	MA MCP Required	MCP Certification Form Required	CT RCP Required	RCP Certification Form Required	MA State DW Required	PWSD #
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Project Entity	Government	Federal	City	Municipality	21 J	Brownfield	MWRA	School	MBTA	WRTA	Chromatogram	AIHA-LAP, LLC
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>





I Have Not Confirmed Sample Container Numbers With Lab Staff Before Relinquishing Over Samples \_\_\_\_\_



**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 Vertex

Received By mp Date 4/12/19 Time 20:26

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 # 3 Actual Temp - 4.1  
 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 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? F Who was notified? \_\_\_\_\_  
 Are there Short Holds? T Who was notified? Miranda  
 Is there enough Volume? T  
 Is there Headspace where applicable? N/A 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? N/A Acid \_\_\_\_\_ Base \_\_\_\_\_

Vials	#	Containers:	#	#	#	#
Unp-		1 Liter Amb.		1 Liter Plastic		16 oz Amb.
HCL-		500 mL Amb.		500 mL Plastic		8oz Amb/Clear
Meoh-	1	250 mL Amb.		250 mL Plastic		4oz Amb/Clear
Bisulfate-		Flashpoint		Col./Bacteria		2oz Amb/Clear
DI-	2	Other Glass		Other Plastic	1	Encore
Thiosulfate-		SOC Kit		Plastic Bag		Frozen: 4/12/19 20:26
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 #: 19D0736		
Project Location: Wayland, MA			RTN:		
This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)] 19D0736-01 thru 19D0736-07					
Matrices: Soil					
<b>CAM Protocol (check all that below)</b>					
8260 VOC CAM II A (X)	7470/7471 Hg CAM III B (X)	MassDEP VPH CAM IV A ( )	8082 PCB CAM V A (X)	9014 Total Cyanide/PAC CAM VI A ( )	6860 Perchlorate CAM VIII B ( )
8270 SVOC CAM II B (X)	7010 Metals CAM III C ( )	MassDEP VPH CAM IV C ( )	8081 Pesticides CAM V B ( )	7196 Hex Cr CAM VI B ( )	MassDEP APH CAM IX A ( )
6010 Metals CAM III A (X)	6020 Metals CAM III D ( )	MassDEP EPH CAM IV B ( )	8151 Herbicides CAM V C ( )	8330 Explosives CAM VIII A ( )	TO-15 VOC CAM IX B ( )
<b>Affirmative response to Questions A through F is required for "Presumptive Certainty" status</b>					
<b>A</b>	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?				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>B</b>	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>C</b>	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>D</b>	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?				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>E a</b>	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).				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>E b</b>	APH and TO-15 Methods only: Was the complete analyte list reported for each method?				<input type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>F</b>	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)?				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>A response to questions G, H and I below is required for "Presumptive Certainty" status</b>					
<b>G</b>	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>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.</b>					
<b>H</b>	Were all QC performance standards specified in the CAM protocol(s) achieved?				<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <sup>1</sup>
<b>I</b>	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?				<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <sup>1</sup>
<sup>1</sup> All Negative responses must be addressed in an attached Environmental Laboratory case narrative.					
<b>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.</b>					
Signature: <u>Tod E. Kopyscinski</u>			Position: Laboratory Director		
Printed Name: <u>Tod E. Kopyscinski</u>			Date: <u>04/19/19</u>		

April 8, 2019

Kristen Sarson  
Vertex Engineering - Boston  
100 North Washington St. Suite 302  
Boston, MA 02114

Project Location: Wayland, MA  
Client Job Number:  
Project Number: 46047  
Laboratory Work Order Number: 19D0030

Enclosed are results of analyses for samples received by the laboratory on April 1, 2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Jessica Hoffman". The signature is written in a cursive style with a light blue background behind it.

Jessica L. Hoffman  
Project Manager

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

Vertex Engineering - Boston  
 100 North Washington St. Suite 302  
 Boston, MA 02114  
 ATTN: Kristen Sarson

REPORT DATE: 4/8/2019

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 46047

**ANALYTICAL SUMMARY**

WORK ORDER NUMBER: 19D0030

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

PROJECT LOCATION: Wayland, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
V-101 (MW)	19D0030-02	Ground Water		EPA 300.0 SM 21-22 4500 P E SM19-22 4500 NH3 C SM19-22 4500-N Org B,C-NH3 C SW-846 6020B SW-846 7470A SW-846 8082A SW-846 8260C SW-846 8270D	
V-102 (MW)	19D0030-03	Ground Water		EPA 300.0 SM 21-22 4500 P E SM19-22 4500 NH3 C SM19-22 4500-N Org B,C-NH3 C SW-846 6020B SW-846 7470A SW-846 8082A SW-846 8260C SW-846 8270D	
V-105 (MW)	19D0030-04	Ground Water		EPA 300.0 SM 21-22 4500 P E SM19-22 4500 NH3 C SM19-22 4500-N Org B,C-NH3 C SW-846 6020B SW-846 7470A SW-846 8082A SW-846 8260C SW-846 8270D	

**CASE NARRATIVE SUMMARY**

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

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EPA 300.0

**Qualifications:****MS-07**

Matrix spike recovery is outside of control limits. Analysis is in control based on laboratory fortified blank recovery. Possibility of sample matrix effects that lead to low bias for reported result or non-homogeneous sample aliquot cannot be eliminated.

**Analyte & Samples(s) Qualified:****Nitrate as N**

19D0030-04[V-105 (MW)], B227319-MS1

SM 21-22 4500 P E

**Qualifications:****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:****Orthophosphate as P**

B227187-BSD1

**Phosphorus, Total**

B227249-BSD1

**W-17**

Samples analyzed for Ortho phosphate were not filtered within 15 minutes of sampling.

**Analyte & Samples(s) Qualified:****Orthophosphate as P**

19D0030-02[V-101 (MW)], 19D0030-03[V-102 (MW)], 19D0030-04[V-105 (MW)]

SW-846 6020B

**Qualifications:****MS-19**

Sample to spike ratio is greater than or equal to 4:1. Spiked amount is not representative of the native amount in the sample. Appropriate or meaningful recoveries cannot be calculated.

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

19D0030-02[V-101 (MW)], B227365-MS1

SW-846 8260C

**Qualifications:****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:****Acetone**

19D0030-02[V-101 (MW)], 19D0030-03[V-102 (MW)], 19D0030-04[V-105 (MW)], B227205-BLK1, B227205-BS1, B227205-BSD1, S034302-CCV1

**RL-07**

Elevated reporting limit based on lowest point in calibration.

MA CAM reporting limit not met.

**Analyte & Samples(s) Qualified:****1,2,3-Trichlorobenzene**

19D0030-02[V-101 (MW)], 19D0030-03[V-102 (MW)], 19D0030-04[V-105 (MW)]

**1,2,4-Trichlorobenzene**

19D0030-02[V-101 (MW)], 19D0030-03[V-102 (MW)], 19D0030-04[V-105 (MW)]

**1,2-Dibromo-3-chloropropane (DBP)**

19D0030-02[V-101 (MW)], 19D0030-03[V-102 (MW)], 19D0030-04[V-105 (MW)]

**Carbon Disulfide**

19D0030-02[V-101 (MW)], 19D0030-03[V-102 (MW)], 19D0030-04[V-105 (MW)]

**Methylene Chloride**

19D0030-02[V-101 (MW)], 19D0030-03[V-102 (MW)], 19D0030-04[V-105 (MW)]

**Naphthalene**

19D0030-02[V-101 (MW)], 19D0030-03[V-102 (MW)], 19D0030-04[V-105 (MW)]



**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**

19D0030-02[V-101 (MW)], 19D0030-03[V-102 (MW)], 19D0030-04[V-105 (MW)], B227205-BLK1, B227205-BS1, B227205-BSD1, S034302-CCV1

**V-20**

Continuing calibration verification (CCV) 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:****Styrene**

B227205-BS1, B227205-BSD1, S034302-CCV1

**SW-846 8270D****Qualifications:****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:****4-Chloroaniline**

19D0030-02[V-101 (MW)], 19D0030-03[V-102 (MW)], 19D0030-04[V-105 (MW)], B227556-BLK1, B227556-BS1, B227556-BSD1, S034392-CCV1

**Aniline**

19D0030-02[V-101 (MW)], 19D0030-03[V-102 (MW)], 19D0030-04[V-105 (MW)], B227556-BLK1, B227556-BS1, B227556-BSD1, S034392-CCV1

**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  
Technical Representative

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19D0030

Date Received: 4/1/2019

Field Sample #: V-101 (MW)

Sampled: 4/1/2019 09:15

Sample ID: 19D0030-02

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	10	µg/L	1	R-05	SW-846 8260C	4/3/19	4/3/19 16:06	EEH
tert-Amyl Methyl Ether (TAME)	4.5	2.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:06	EEH
Benzene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:06	EEH
Bromobenzene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:06	EEH
Bromochloromethane	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:06	EEH
Bromodichloromethane	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:06	EEH
Bromoform	ND	2.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:06	EEH
Bromomethane	ND	2.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:06	EEH
2-Butanone (MEK)	ND	10	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:06	EEH
n-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:06	EEH
sec-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:06	EEH
tert-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:06	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:06	EEH
Carbon Disulfide	ND	5.0	µg/L	1	RL-07	SW-846 8260C	4/3/19	4/3/19 16:06	EEH
Carbon Tetrachloride	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:06	EEH
Chlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:06	EEH
Chlorodibromomethane	ND	0.50	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:06	EEH
Chloroethane	ND	2.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:06	EEH
Chloroform	ND	2.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:06	EEH
Chloromethane	ND	2.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:06	EEH
2-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:06	EEH
4-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:06	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	µg/L	1	RL-07	SW-846 8260C	4/3/19	4/3/19 16:06	EEH
1,2-Dibromoethane (EDB)	ND	0.50	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:06	EEH
Dibromomethane	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:06	EEH
1,2-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:06	EEH
1,3-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:06	EEH
1,4-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:06	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:06	EEH
1,1-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:06	EEH
1,2-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:06	EEH
1,1-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:06	EEH
cis-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:06	EEH
trans-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:06	EEH
1,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:06	EEH
1,3-Dichloropropane	ND	0.50	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:06	EEH
2,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:06	EEH
1,1-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:06	EEH
cis-1,3-Dichloropropene	ND	0.40	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:06	EEH
trans-1,3-Dichloropropene	ND	0.40	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:06	EEH
Diethyl Ether	ND	2.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:06	EEH
Diisopropyl Ether (DIPE)	ND	0.50	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:06	EEH
1,4-Dioxane	ND	50	µg/L	1	V-16	SW-846 8260C	4/3/19	4/3/19 16:06	EEH
Ethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:06	EEH

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19D0030

Date Received: 4/1/2019

Field Sample #: V-101 (MW)

Sampled: 4/1/2019 09:15

Sample ID: 19D0030-02

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.60	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:06	EEH
2-Hexanone (MBK)	ND	10	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:06	EEH
Isopropylbenzene (Cumene)	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:06	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:06	EEH
Methyl tert-Butyl Ether (MTBE)	8.2	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:06	EEH
Methylene Chloride	ND	5.0	µg/L	1	RL-07	SW-846 8260C	4/3/19	4/3/19 16:06	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:06	EEH
Naphthalene	ND	5.0	µg/L	1	RL-07	SW-846 8260C	4/3/19	4/3/19 16:06	EEH
n-Propylbenzene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:06	EEH
Styrene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:06	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:06	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:06	EEH
Tetrachloroethylene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:06	EEH
Tetrahydrofuran	ND	2.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:06	EEH
Toluene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:06	EEH
1,2,3-Trichlorobenzene	ND	5.0	µg/L	1	RL-07	SW-846 8260C	4/3/19	4/3/19 16:06	EEH
1,2,4-Trichlorobenzene	ND	5.0	µg/L	1	RL-07	SW-846 8260C	4/3/19	4/3/19 16:06	EEH
1,1,1-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:06	EEH
1,1,2-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:06	EEH
Trichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:06	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:06	EEH
1,2,3-Trichloropropane	ND	2.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:06	EEH
1,2,4-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:06	EEH
1,3,5-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:06	EEH
Vinyl Chloride	ND	2.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:06	EEH
m+p Xylene	ND	2.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:06	EEH
o-Xylene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:06	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	88.3	70-130	4/3/19 16:06
Toluene-d8	97.0	70-130	4/3/19 16:06
4-Bromofluorobenzene	98.0	70-130	4/3/19 16:06

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Project Location: Wayland, MA

Sample Description:

Work Order: 19D0030

Date Received: 4/1/2019

Field Sample #: V-101 (MW)

Sampled: 4/1/2019 09:15

Sample ID: 19D0030-02

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	5.5	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:02	BGL
Acenaphthylene	ND	5.5	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:02	BGL
Acetophenone	ND	11	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:02	BGL
Aniline	ND	5.5	µg/L	1	V-34	SW-846 8270D	4/5/19	4/6/19 15:02	BGL
Anthracene	ND	5.5	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:02	BGL
Benzo(a)anthracene	ND	5.5	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:02	BGL
Benzo(a)pyrene	ND	5.5	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:02	BGL
Benzo(b)fluoranthene	ND	5.5	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:02	BGL
Benzo(g,h,i)perylene	ND	5.5	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:02	BGL
Benzo(k)fluoranthene	ND	5.5	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:02	BGL
Bis(2-chloroethoxy)methane	ND	11	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:02	BGL
Bis(2-chloroethyl)ether	ND	11	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:02	BGL
Bis(2-chloroisopropyl)ether	ND	11	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:02	BGL
Bis(2-Ethylhexyl)phthalate	ND	11	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:02	BGL
4-Bromophenylphenylether	ND	11	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:02	BGL
Butylbenzylphthalate	ND	11	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:02	BGL
4-Chloroaniline	ND	11	µg/L	1	V-34	SW-846 8270D	4/5/19	4/6/19 15:02	BGL
2-Chloronaphthalene	ND	11	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:02	BGL
2-Chlorophenol	ND	11	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:02	BGL
Chrysene	ND	5.5	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:02	BGL
Dibenz(a,h)anthracene	ND	5.5	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:02	BGL
Dibenzofuran	ND	5.5	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:02	BGL
Di-n-butylphthalate	ND	11	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:02	BGL
1,2-Dichlorobenzene	ND	5.5	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:02	BGL
1,3-Dichlorobenzene	ND	5.5	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:02	BGL
1,4-Dichlorobenzene	ND	5.5	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:02	BGL
3,3-Dichlorobenzidine	ND	11	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:02	BGL
2,4-Dichlorophenol	ND	11	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:02	BGL
Diethylphthalate	ND	11	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:02	BGL
2,4-Dimethylphenol	ND	11	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:02	BGL
Dimethylphthalate	ND	11	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:02	BGL
2,4-Dinitrophenol	ND	11	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:02	BGL
2,4-Dinitrotoluene	ND	11	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:02	BGL
2,6-Dinitrotoluene	ND	11	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:02	BGL
Di-n-octylphthalate	ND	11	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:02	BGL
1,2-Diphenylhydrazine/Azobenzene	ND	11	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:02	BGL
Fluoranthene	ND	5.5	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:02	BGL
Fluorene	ND	5.5	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:02	BGL
Hexachlorobenzene	ND	11	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:02	BGL
Hexachlorobutadiene	ND	11	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:02	BGL
Hexachloroethane	ND	11	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:02	BGL
Indeno(1,2,3-cd)pyrene	ND	5.5	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:02	BGL
Isophorone	ND	11	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:02	BGL
2-Methylnaphthalene	ND	5.5	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:02	BGL

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19D0030

Date Received: 4/1/2019

Field Sample #: V-101 (MW)

Sampled: 4/1/2019 09:15

Sample ID: 19D0030-02

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-Methylphenol	ND	11	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:02	BGL
3/4-Methylphenol	ND	11	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:02	BGL
Naphthalene	ND	5.5	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:02	BGL
Nitrobenzene	ND	11	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:02	BGL
2-Nitrophenol	ND	11	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:02	BGL
4-Nitrophenol	ND	11	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:02	BGL
Pentachlorophenol	ND	11	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:02	BGL
Phenanthrene	ND	5.5	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:02	BGL
Phenol	ND	11	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:02	BGL
Pyrene	ND	5.5	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:02	BGL
1,2,4-Trichlorobenzene	ND	5.5	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:02	BGL
2,4,5-Trichlorophenol	ND	11	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:02	BGL
2,4,6-Trichlorophenol	ND	11	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:02	BGL

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	43.5	15-110	
Phenol-d6	32.8	15-110	
Nitrobenzene-d5	73.3	30-130	
2-Fluorobiphenyl	76.5	30-130	
2,4,6-Tribromophenol	80.3	15-110	
p-Terphenyl-d14	88.7	30-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19D0030

Date Received: 4/1/2019

Field Sample #: V-101 (MW)

Sampled: 4/1/2019 09:15

Sample ID: 19D0030-02

Sample Matrix: Ground Water

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.15	µg/L	1		SW-846 8082A	4/5/19	4/6/19 17:52	JMB
Aroclor-1221 [1]	ND	0.15	µg/L	1		SW-846 8082A	4/5/19	4/6/19 17:52	JMB
Aroclor-1232 [1]	ND	0.15	µg/L	1		SW-846 8082A	4/5/19	4/6/19 17:52	JMB
Aroclor-1242 [1]	ND	0.15	µg/L	1		SW-846 8082A	4/5/19	4/6/19 17:52	JMB
Aroclor-1248 [1]	ND	0.15	µg/L	1		SW-846 8082A	4/5/19	4/6/19 17:52	JMB
Aroclor-1254 [1]	ND	0.15	µg/L	1		SW-846 8082A	4/5/19	4/6/19 17:52	JMB
Aroclor-1260 [1]	ND	0.15	µg/L	1		SW-846 8082A	4/5/19	4/6/19 17:52	JMB
Aroclor-1262 [1]	ND	0.15	µg/L	1		SW-846 8082A	4/5/19	4/6/19 17:52	JMB
Aroclor-1268 [1]	ND	0.15	µg/L	1		SW-846 8082A	4/5/19	4/6/19 17:52	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		82.2	30-150					4/6/19 17:52	
Decachlorobiphenyl [2]		84.6	30-150					4/6/19 17:52	
Tetrachloro-m-xylene [1]		73.8	30-150					4/6/19 17:52	
Tetrachloro-m-xylene [2]		78.5	30-150					4/6/19 17:52	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19D0030

Date Received: 4/1/2019

Field Sample #: V-101 (MW)

Sampled: 4/1/2019 09:15

Sample ID: 19D0030-02

Sample Matrix: Ground Water

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.0	µg/L	1		SW-846 6020B	4/3/19	4/4/19 13:39	QNW
Arsenic	ND	0.40	µg/L	1		SW-846 6020B	4/3/19	4/4/19 13:39	QNW
Barium	93	10	µg/L	1		SW-846 6020B	4/3/19	4/4/19 13:39	QNW
Beryllium	ND	0.40	µg/L	1		SW-846 6020B	4/3/19	4/4/19 13:39	QNW
Cadmium	0.52	0.50	µg/L	1		SW-846 6020B	4/3/19	4/4/19 13:39	QNW
Chromium	ND	1.0	µg/L	1		SW-846 6020B	4/3/19	4/4/19 13:39	QNW
Copper	5.1	5.0	µg/L	1		SW-846 6020B	4/3/19	4/4/19 13:39	QNW
Lead	ND	1.0	µg/L	1		SW-846 6020B	4/3/19	4/4/19 13:39	QNW
Manganese	4400	100	µg/L	100	MS-19	SW-846 6020B	4/3/19	4/5/19 10:53	QNW
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	4/8/19	4/8/19 14:29	EJB
Nickel	17	5.0	µg/L	1		SW-846 6020B	4/3/19	4/4/19 13:39	QNW
Selenium	ND	5.0	µg/L	1		SW-846 6020B	4/3/19	4/4/19 13:39	QNW
Silver	ND	0.50	µg/L	1		SW-846 6020B	4/3/19	4/4/19 13:39	QNW
Thallium	ND	0.20	µg/L	1		SW-846 6020B	4/3/19	4/4/19 13:39	QNW
Vanadium	ND	5.0	µg/L	1		SW-846 6020B	4/3/19	4/4/19 13:39	QNW
Zinc	ND	10	µg/L	1		SW-846 6020B	4/3/19	4/4/19 13:39	QNW

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Project Location: Wayland, MA

Sample Description:

Work Order: 19D0030

Date Received: 4/1/2019

Field Sample #: V-101 (MW)

Sampled: 4/1/2019 09:15

Sample ID: 19D0030-02

Sample Matrix: Ground Water

**Metals Analyses (Dissolved)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	0.98	0.40	µg/L	1		SW-846 6020B	4/5/19	4/8/19 10:53	QNW



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Project Location: Wayland, MA

Sample Description:

Work Order: 19D0030

Date Received: 4/1/2019

Field Sample #: V-101 (MW)

Sampled: 4/1/2019 09:15

Sample ID: 19D0030-02

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	1.5	0.30	mg/L	1		SM19-22 4500 NH3 C	4/2/19	4/3/19 10:00	EC
Chloride	260	10	mg/L	10		EPA 300.0	4/5/19	4/5/19 10:48	IS
Nitrate as N	2.7	0.10	mg/L	1		EPA 300.0	4/2/19	4/2/19 6:24	IS
Nitrite as N	0.400	0.100	mg/L	1		EPA 300.0	4/2/19	4/2/19 6:24	IS
Orthophosphate as P	ND	0.050	mg/L	1	W-17	SM 21-22 4500 P E	4/1/19	4/1/19 21:30	IS
Phosphorus, Total	ND	0.062	mg/L	1.25		SM 21-22 4500 P E	4/2/19	4/2/19 14:09	IS
Total Kjeldahl Nitrogen	2.0	1.0	mg/L	1		SM19-22 4500-N Org B,C-NH3 C	4/3/19	4/4/19 9:45	EC
Total Nitrogen	5.1	0.050	mg/L	1		SM19-22 4500-N Org B,C-NH3 C	4/8/19	4/8/19 7:28	LL

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Project Location: Wayland, MA

Sample Description:

Work Order: 19D0030

Date Received: 4/1/2019

Field Sample #: V-102 (MW)

Sampled: 4/1/2019 11:00

Sample ID: 19D0030-03

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	10	µg/L	1	R-05	SW-846 8260C	4/3/19	4/3/19 16:33	EEH
tert-Amyl Methyl Ether (TAME)	ND	2.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:33	EEH
Benzene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:33	EEH
Bromobenzene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:33	EEH
Bromochloromethane	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:33	EEH
Bromodichloromethane	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:33	EEH
Bromoform	ND	2.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:33	EEH
Bromomethane	ND	2.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:33	EEH
2-Butanone (MEK)	ND	10	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:33	EEH
n-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:33	EEH
sec-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:33	EEH
tert-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:33	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:33	EEH
Carbon Disulfide	ND	5.0	µg/L	1	RL-07	SW-846 8260C	4/3/19	4/3/19 16:33	EEH
Carbon Tetrachloride	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:33	EEH
Chlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:33	EEH
Chlorodibromomethane	ND	0.50	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:33	EEH
Chloroethane	ND	2.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:33	EEH
Chloroform	ND	2.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:33	EEH
Chloromethane	ND	2.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:33	EEH
2-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:33	EEH
4-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:33	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	µg/L	1	RL-07	SW-846 8260C	4/3/19	4/3/19 16:33	EEH
1,2-Dibromoethane (EDB)	ND	0.50	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:33	EEH
Dibromomethane	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:33	EEH
1,2-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:33	EEH
1,3-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:33	EEH
1,4-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:33	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:33	EEH
1,1-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:33	EEH
1,2-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:33	EEH
1,1-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:33	EEH
cis-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:33	EEH
trans-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:33	EEH
1,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:33	EEH
1,3-Dichloropropane	ND	0.50	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:33	EEH
2,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:33	EEH
1,1-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:33	EEH
cis-1,3-Dichloropropene	ND	0.40	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:33	EEH
trans-1,3-Dichloropropene	ND	0.40	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:33	EEH
Diethyl Ether	ND	2.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:33	EEH
Diisopropyl Ether (DIPE)	ND	0.50	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:33	EEH
1,4-Dioxane	ND	50	µg/L	1	V-16	SW-846 8260C	4/3/19	4/3/19 16:33	EEH
Ethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:33	EEH

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Project Location: Wayland, MA

Sample Description:

Work Order: 19D0030

Date Received: 4/1/2019

Field Sample #: V-102 (MW)

Sampled: 4/1/2019 11:00

Sample ID: 19D0030-03

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.60	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:33	EEH
2-Hexanone (MBK)	ND	10	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:33	EEH
Isopropylbenzene (Cumene)	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:33	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:33	EEH
Methyl tert-Butyl Ether (MTBE)	1.1	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:33	EEH
Methylene Chloride	ND	5.0	µg/L	1	RL-07	SW-846 8260C	4/3/19	4/3/19 16:33	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:33	EEH
Naphthalene	ND	5.0	µg/L	1	RL-07	SW-846 8260C	4/3/19	4/3/19 16:33	EEH
n-Propylbenzene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:33	EEH
Styrene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:33	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:33	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:33	EEH
Tetrachloroethylene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:33	EEH
Tetrahydrofuran	ND	2.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:33	EEH
Toluene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:33	EEH
1,2,3-Trichlorobenzene	ND	5.0	µg/L	1	RL-07	SW-846 8260C	4/3/19	4/3/19 16:33	EEH
1,2,4-Trichlorobenzene	ND	5.0	µg/L	1	RL-07	SW-846 8260C	4/3/19	4/3/19 16:33	EEH
1,1,1-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:33	EEH
1,1,2-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:33	EEH
Trichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:33	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:33	EEH
1,2,3-Trichloropropane	ND	2.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:33	EEH
1,2,4-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:33	EEH
1,3,5-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:33	EEH
Vinyl Chloride	ND	2.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:33	EEH
m+p Xylene	ND	2.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:33	EEH
o-Xylene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 16:33	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	87.6	70-130	4/3/19 16:33
Toluene-d8	98.1	70-130	4/3/19 16:33
4-Bromofluorobenzene	98.7	70-130	4/3/19 16:33

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19D0030

Date Received: 4/1/2019

Field Sample #: V-102 (MW)

Sampled: 4/1/2019 11:00

Sample ID: 19D0030-03

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	4.9	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:28	BGL
Acenaphthylene	ND	4.9	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:28	BGL
Acetophenone	ND	9.8	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:28	BGL
Aniline	ND	4.9	µg/L	1	V-34	SW-846 8270D	4/5/19	4/6/19 15:28	BGL
Anthracene	ND	4.9	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:28	BGL
Benzo(a)anthracene	ND	4.9	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:28	BGL
Benzo(a)pyrene	ND	4.9	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:28	BGL
Benzo(b)fluoranthene	ND	4.9	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:28	BGL
Benzo(g,h,i)perylene	ND	4.9	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:28	BGL
Benzo(k)fluoranthene	ND	4.9	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:28	BGL
Bis(2-chloroethoxy)methane	ND	9.8	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:28	BGL
Bis(2-chloroethyl)ether	ND	9.8	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:28	BGL
Bis(2-chloroisopropyl)ether	ND	9.8	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:28	BGL
Bis(2-Ethylhexyl)phthalate	ND	9.8	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:28	BGL
4-Bromophenylphenylether	ND	9.8	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:28	BGL
Butylbenzylphthalate	ND	9.8	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:28	BGL
4-Chloroaniline	ND	9.8	µg/L	1	V-34	SW-846 8270D	4/5/19	4/6/19 15:28	BGL
2-Chloronaphthalene	ND	9.8	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:28	BGL
2-Chlorophenol	ND	9.8	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:28	BGL
Chrysene	ND	4.9	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:28	BGL
Dibenz(a,h)anthracene	ND	4.9	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:28	BGL
Dibenzofuran	ND	4.9	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:28	BGL
Di-n-butylphthalate	ND	9.8	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:28	BGL
1,2-Dichlorobenzene	ND	4.9	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:28	BGL
1,3-Dichlorobenzene	ND	4.9	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:28	BGL
1,4-Dichlorobenzene	ND	4.9	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:28	BGL
3,3-Dichlorobenzidine	ND	9.8	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:28	BGL
2,4-Dichlorophenol	ND	9.8	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:28	BGL
Diethylphthalate	ND	9.8	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:28	BGL
2,4-Dimethylphenol	ND	9.8	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:28	BGL
Dimethylphthalate	ND	9.8	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:28	BGL
2,4-Dinitrophenol	ND	9.8	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:28	BGL
2,4-Dinitrotoluene	ND	9.8	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:28	BGL
2,6-Dinitrotoluene	ND	9.8	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:28	BGL
Di-n-octylphthalate	ND	9.8	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:28	BGL
1,2-Diphenylhydrazine/Azobenzene	ND	9.8	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:28	BGL
Fluoranthene	ND	4.9	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:28	BGL
Fluorene	ND	4.9	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:28	BGL
Hexachlorobenzene	ND	9.8	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:28	BGL
Hexachlorobutadiene	ND	9.8	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:28	BGL
Hexachloroethane	ND	9.8	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:28	BGL
Indeno(1,2,3-cd)pyrene	ND	4.9	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:28	BGL
Isophorone	ND	9.8	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:28	BGL
2-Methylnaphthalene	ND	4.9	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:28	BGL

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19D0030

Date Received: 4/1/2019

Field Sample #: V-102 (MW)

Sampled: 4/1/2019 11:00

Sample ID: 19D0030-03

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-Methylphenol	ND	9.8	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:28	BGL
3/4-Methylphenol	ND	9.8	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:28	BGL
Naphthalene	ND	4.9	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:28	BGL
Nitrobenzene	ND	9.8	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:28	BGL
2-Nitrophenol	ND	9.8	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:28	BGL
4-Nitrophenol	ND	9.8	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:28	BGL
Pentachlorophenol	ND	9.8	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:28	BGL
Phenanthrene	ND	4.9	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:28	BGL
Phenol	ND	9.8	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:28	BGL
Pyrene	ND	4.9	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:28	BGL
1,2,4-Trichlorobenzene	ND	4.9	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:28	BGL
2,4,5-Trichlorophenol	ND	9.8	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:28	BGL
2,4,6-Trichlorophenol	ND	9.8	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:28	BGL
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2-Fluorophenol		45.3	15-110					4/6/19 15:28	
Phenol-d6		33.7	15-110					4/6/19 15:28	
Nitrobenzene-d5		81.0	30-130					4/6/19 15:28	
2-Fluorobiphenyl		83.7	30-130					4/6/19 15:28	
2,4,6-Tribromophenol		91.8	15-110					4/6/19 15:28	
p-Terphenyl-d14		97.0	30-130					4/6/19 15:28	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19D0030

Date Received: 4/1/2019

Field Sample #: V-102 (MW)

Sampled: 4/1/2019 11:00

Sample ID: 19D0030-03

Sample Matrix: Ground Water

**Polychlorinated Biphenyls By GC/ECD**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.17	µg/L	1		SW-846 8082A	4/5/19	4/6/19 18:10	JMB
Aroclor-1221 [1]	ND	0.17	µg/L	1		SW-846 8082A	4/5/19	4/6/19 18:10	JMB
Aroclor-1232 [1]	ND	0.17	µg/L	1		SW-846 8082A	4/5/19	4/6/19 18:10	JMB
Aroclor-1242 [1]	ND	0.17	µg/L	1		SW-846 8082A	4/5/19	4/6/19 18:10	JMB
Aroclor-1248 [1]	ND	0.17	µg/L	1		SW-846 8082A	4/5/19	4/6/19 18:10	JMB
Aroclor-1254 [1]	ND	0.17	µg/L	1		SW-846 8082A	4/5/19	4/6/19 18:10	JMB
Aroclor-1260 [1]	ND	0.17	µg/L	1		SW-846 8082A	4/5/19	4/6/19 18:10	JMB
Aroclor-1262 [1]	ND	0.17	µg/L	1		SW-846 8082A	4/5/19	4/6/19 18:10	JMB
Aroclor-1268 [1]	ND	0.17	µg/L	1		SW-846 8082A	4/5/19	4/6/19 18:10	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		76.1	30-150					4/6/19 18:10	
Decachlorobiphenyl [2]		78.5	30-150					4/6/19 18:10	
Tetrachloro-m-xylene [1]		77.1	30-150					4/6/19 18:10	
Tetrachloro-m-xylene [2]		81.2	30-150					4/6/19 18:10	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19D0030

Date Received: 4/1/2019

Field Sample #: V-102 (MW)

Sampled: 4/1/2019 11:00

Sample ID: 19D0030-03

Sample Matrix: Ground Water

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.0	µg/L	1		SW-846 6020B	4/3/19	4/4/19 15:22	QNW
Arsenic	22	0.40	µg/L	1		SW-846 6020B	4/3/19	4/4/19 15:22	QNW
Barium	210	50	µg/L	5		SW-846 6020B	4/3/19	4/5/19 11:07	QNW
Beryllium	ND	0.40	µg/L	1		SW-846 6020B	4/3/19	4/4/19 15:22	QNW
Cadmium	ND	0.50	µg/L	1		SW-846 6020B	4/3/19	4/4/19 15:22	QNW
Chromium	ND	1.0	µg/L	1		SW-846 6020B	4/3/19	4/4/19 15:22	QNW
Copper	ND	5.0	µg/L	1		SW-846 6020B	4/3/19	4/4/19 15:22	QNW
Lead	ND	1.0	µg/L	1		SW-846 6020B	4/3/19	4/4/19 15:22	QNW
Manganese	7000	100	µg/L	100		SW-846 6020B	4/3/19	4/5/19 11:00	QNW
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	4/8/19	4/8/19 14:30	EJB
Nickel	9.0	5.0	µg/L	1		SW-846 6020B	4/3/19	4/4/19 15:22	QNW
Selenium	ND	5.0	µg/L	1		SW-846 6020B	4/3/19	4/4/19 15:22	QNW
Silver	ND	0.50	µg/L	1		SW-846 6020B	4/3/19	4/4/19 15:22	QNW
Thallium	ND	0.20	µg/L	1		SW-846 6020B	4/3/19	4/4/19 15:22	QNW
Vanadium	ND	5.0	µg/L	1		SW-846 6020B	4/3/19	4/5/19 12:12	QNW
Zinc	ND	10	µg/L	1		SW-846 6020B	4/3/19	4/4/19 15:22	QNW

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Project Location: Wayland, MA

Sample Description:

Work Order: 19D0030

Date Received: 4/1/2019

Field Sample #: V-102 (MW)

Sampled: 4/1/2019 11:00

Sample ID: 19D0030-03

Sample Matrix: Ground Water

**Metals Analyses (Dissolved)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	26	0.40	µg/L	1		SW-846 6020B	4/5/19	4/8/19 10:56	QNW



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

Project Location: Wayland, MA

Sample Description:

Work Order: 19D0030

Date Received: 4/1/2019

Field Sample #: V-102 (MW)

Sampled: 4/1/2019 11:00

Sample ID: 19D0030-03

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	1.5	0.30	mg/L	1		SM19-22 4500 NH3 C	4/2/19	4/3/19 10:00	EC
Chloride	95	10	mg/L	10		EPA 300.0	4/5/19	4/5/19 11:03	IS
Nitrate as N	4.7	0.10	mg/L	1		EPA 300.0	4/2/19	4/2/19 6:38	IS
Nitrite as N	0.254	0.100	mg/L	1		EPA 300.0	4/2/19	4/2/19 6:38	IS
Orthophosphate as P	ND	0.050	mg/L	1	W-17	SM 21-22 4500 P E	4/1/19	4/1/19 21:30	IS
Phosphorus, Total	ND	0.062	mg/L	1.25		SM 21-22 4500 P E	4/2/19	4/2/19 14:09	IS
Total Kjeldahl Nitrogen	2.0	1.0	mg/L	1		SM19-22 4500-N Org B,C-NH3 C	4/3/19	4/4/19 9:45	EC
Total Nitrogen	7.0	0.050	mg/L	1		SM19-22 4500-N Org B,C-NH3 C	4/8/19	4/8/19 7:28	LL

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Project Location: Wayland, MA

Sample Description:

Work Order: 19D0030

Date Received: 4/1/2019

Field Sample #: V-105 (MW)

Sampled: 4/1/2019 15:00

Sample ID: 19D0030-04

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	10	µg/L	1	R-05	SW-846 8260C	4/3/19	4/3/19 17:00	EEH
tert-Amyl Methyl Ether (TAME)	ND	2.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 17:00	EEH
Benzene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 17:00	EEH
Bromobenzene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 17:00	EEH
Bromochloromethane	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 17:00	EEH
Bromodichloromethane	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 17:00	EEH
Bromoform	ND	2.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 17:00	EEH
Bromomethane	ND	2.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 17:00	EEH
2-Butanone (MEK)	ND	10	µg/L	1		SW-846 8260C	4/3/19	4/3/19 17:00	EEH
n-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 17:00	EEH
sec-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 17:00	EEH
tert-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 17:00	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	µg/L	1		SW-846 8260C	4/3/19	4/3/19 17:00	EEH
Carbon Disulfide	ND	5.0	µg/L	1	RL-07	SW-846 8260C	4/3/19	4/3/19 17:00	EEH
Carbon Tetrachloride	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 17:00	EEH
Chlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 17:00	EEH
Chlorodibromomethane	ND	0.50	µg/L	1		SW-846 8260C	4/3/19	4/3/19 17:00	EEH
Chloroethane	ND	2.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 17:00	EEH
Chloroform	ND	2.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 17:00	EEH
Chloromethane	ND	2.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 17:00	EEH
2-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 17:00	EEH
4-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 17:00	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	µg/L	1	RL-07	SW-846 8260C	4/3/19	4/3/19 17:00	EEH
1,2-Dibromoethane (EDB)	ND	0.50	µg/L	1		SW-846 8260C	4/3/19	4/3/19 17:00	EEH
Dibromomethane	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 17:00	EEH
1,2-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 17:00	EEH
1,3-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 17:00	EEH
1,4-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 17:00	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 17:00	EEH
1,1-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 17:00	EEH
1,2-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 17:00	EEH
1,1-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 17:00	EEH
cis-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 17:00	EEH
trans-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 17:00	EEH
1,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 17:00	EEH
1,3-Dichloropropane	ND	0.50	µg/L	1		SW-846 8260C	4/3/19	4/3/19 17:00	EEH
2,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 17:00	EEH
1,1-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260C	4/3/19	4/3/19 17:00	EEH
cis-1,3-Dichloropropene	ND	0.40	µg/L	1		SW-846 8260C	4/3/19	4/3/19 17:00	EEH
trans-1,3-Dichloropropene	ND	0.40	µg/L	1		SW-846 8260C	4/3/19	4/3/19 17:00	EEH
Diethyl Ether	ND	2.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 17:00	EEH
Diisopropyl Ether (DIPE)	ND	0.50	µg/L	1		SW-846 8260C	4/3/19	4/3/19 17:00	EEH
1,4-Dioxane	ND	50	µg/L	1	V-16	SW-846 8260C	4/3/19	4/3/19 17:00	EEH
Ethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 17:00	EEH

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19D0030

Date Received: 4/1/2019

Field Sample #: V-105 (MW)

Sampled: 4/1/2019 15:00

Sample ID: 19D0030-04

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.60	µg/L	1		SW-846 8260C	4/3/19	4/3/19 17:00	EEH
2-Hexanone (MBK)	ND	10	µg/L	1		SW-846 8260C	4/3/19	4/3/19 17:00	EEH
Isopropylbenzene (Cumene)	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 17:00	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 17:00	EEH
Methyl tert-Butyl Ether (MTBE)	1.6	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 17:00	EEH
Methylene Chloride	ND	5.0	µg/L	1	RL-07	SW-846 8260C	4/3/19	4/3/19 17:00	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	µg/L	1		SW-846 8260C	4/3/19	4/3/19 17:00	EEH
Naphthalene	ND	5.0	µg/L	1	RL-07	SW-846 8260C	4/3/19	4/3/19 17:00	EEH
n-Propylbenzene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 17:00	EEH
Styrene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 17:00	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 17:00	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1		SW-846 8260C	4/3/19	4/3/19 17:00	EEH
Tetrachloroethylene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 17:00	EEH
Tetrahydrofuran	ND	2.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 17:00	EEH
Toluene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 17:00	EEH
1,2,3-Trichlorobenzene	ND	5.0	µg/L	1	RL-07	SW-846 8260C	4/3/19	4/3/19 17:00	EEH
1,2,4-Trichlorobenzene	ND	5.0	µg/L	1	RL-07	SW-846 8260C	4/3/19	4/3/19 17:00	EEH
1,1,1-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 17:00	EEH
1,1,2-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 17:00	EEH
Trichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 17:00	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 17:00	EEH
1,2,3-Trichloropropane	ND	2.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 17:00	EEH
1,2,4-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 17:00	EEH
1,3,5-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 17:00	EEH
Vinyl Chloride	ND	2.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 17:00	EEH
m+p Xylene	ND	2.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 17:00	EEH
o-Xylene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 17:00	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	85.9	70-130	4/3/19 17:00
Toluene-d8	97.8	70-130	4/3/19 17:00
4-Bromofluorobenzene	97.0	70-130	4/3/19 17:00

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Project Location: Wayland, MA

Sample Description:

Work Order: 19D0030

Date Received: 4/1/2019

Field Sample #: V-105 (MW)

Sampled: 4/1/2019 15:00

Sample ID: 19D0030-04

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	5.7	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:54	BGL
Acenaphthylene	ND	5.7	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:54	BGL
Acetophenone	ND	11	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:54	BGL
Aniline	ND	5.7	µg/L	1	V-34	SW-846 8270D	4/5/19	4/6/19 15:54	BGL
Anthracene	ND	5.7	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:54	BGL
Benzo(a)anthracene	ND	5.7	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:54	BGL
Benzo(a)pyrene	ND	5.7	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:54	BGL
Benzo(b)fluoranthene	ND	5.7	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:54	BGL
Benzo(g,h,i)perylene	ND	5.7	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:54	BGL
Benzo(k)fluoranthene	ND	5.7	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:54	BGL
Bis(2-chloroethoxy)methane	ND	11	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:54	BGL
Bis(2-chloroethyl)ether	ND	11	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:54	BGL
Bis(2-chloroisopropyl)ether	ND	11	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:54	BGL
Bis(2-Ethylhexyl)phthalate	ND	11	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:54	BGL
4-Bromophenylphenylether	ND	11	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:54	BGL
Butylbenzylphthalate	ND	11	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:54	BGL
4-Chloroaniline	ND	11	µg/L	1	V-34	SW-846 8270D	4/5/19	4/6/19 15:54	BGL
2-Chloronaphthalene	ND	11	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:54	BGL
2-Chlorophenol	ND	11	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:54	BGL
Chrysene	ND	5.7	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:54	BGL
Dibenz(a,h)anthracene	ND	5.7	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:54	BGL
Dibenzofuran	ND	5.7	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:54	BGL
Di-n-butylphthalate	ND	11	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:54	BGL
1,2-Dichlorobenzene	ND	5.7	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:54	BGL
1,3-Dichlorobenzene	ND	5.7	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:54	BGL
1,4-Dichlorobenzene	ND	5.7	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:54	BGL
3,3-Dichlorobenzidine	ND	11	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:54	BGL
2,4-Dichlorophenol	ND	11	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:54	BGL
Diethylphthalate	ND	11	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:54	BGL
2,4-Dimethylphenol	ND	11	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:54	BGL
Dimethylphthalate	ND	11	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:54	BGL
2,4-Dinitrophenol	ND	11	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:54	BGL
2,4-Dinitrotoluene	ND	11	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:54	BGL
2,6-Dinitrotoluene	ND	11	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:54	BGL
Di-n-octylphthalate	ND	11	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:54	BGL
1,2-Diphenylhydrazine/Azobenzene	ND	11	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:54	BGL
Fluoranthene	ND	5.7	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:54	BGL
Fluorene	ND	5.7	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:54	BGL
Hexachlorobenzene	ND	11	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:54	BGL
Hexachlorobutadiene	ND	11	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:54	BGL
Hexachloroethane	ND	11	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:54	BGL
Indeno(1,2,3-cd)pyrene	ND	5.7	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:54	BGL
Isophorone	ND	11	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:54	BGL
2-Methylnaphthalene	ND	5.7	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:54	BGL

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Project Location: Wayland, MA

Sample Description:

Work Order: 19D0030

Date Received: 4/1/2019

Field Sample #: V-105 (MW)

Sampled: 4/1/2019 15:00

Sample ID: 19D0030-04

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-Methylphenol	ND	11	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:54	BGL
3/4-Methylphenol	ND	11	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:54	BGL
Naphthalene	ND	5.7	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:54	BGL
Nitrobenzene	ND	11	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:54	BGL
2-Nitrophenol	ND	11	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:54	BGL
4-Nitrophenol	ND	11	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:54	BGL
Pentachlorophenol	ND	11	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:54	BGL
Phenanthrene	ND	5.7	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:54	BGL
Phenol	ND	11	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:54	BGL
Pyrene	ND	5.7	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:54	BGL
1,2,4-Trichlorobenzene	ND	5.7	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:54	BGL
2,4,5-Trichlorophenol	ND	11	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:54	BGL
2,4,6-Trichlorophenol	ND	11	µg/L	1		SW-846 8270D	4/5/19	4/6/19 15:54	BGL
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2-Fluorophenol		45.8	15-110					4/6/19 15:54	
Phenol-d6		33.9	15-110					4/6/19 15:54	
Nitrobenzene-d5		74.9	30-130					4/6/19 15:54	
2-Fluorobiphenyl		76.8	30-130					4/6/19 15:54	
2,4,6-Tribromophenol		85.8	15-110					4/6/19 15:54	
p-Terphenyl-d14		87.2	30-130					4/6/19 15:54	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19D0030

Date Received: 4/1/2019

Field Sample #: V-105 (MW)

Sampled: 4/1/2019 15:00

Sample ID: 19D0030-04

Sample Matrix: Ground Water

**Polychlorinated Biphenyls By GC/ECD**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.17	µg/L	1		SW-846 8082A	4/5/19	4/6/19 18:27	JMB
Aroclor-1221 [1]	ND	0.17	µg/L	1		SW-846 8082A	4/5/19	4/6/19 18:27	JMB
Aroclor-1232 [1]	ND	0.17	µg/L	1		SW-846 8082A	4/5/19	4/6/19 18:27	JMB
Aroclor-1242 [1]	ND	0.17	µg/L	1		SW-846 8082A	4/5/19	4/6/19 18:27	JMB
Aroclor-1248 [1]	ND	0.17	µg/L	1		SW-846 8082A	4/5/19	4/6/19 18:27	JMB
Aroclor-1254 [1]	ND	0.17	µg/L	1		SW-846 8082A	4/5/19	4/6/19 18:27	JMB
Aroclor-1260 [1]	ND	0.17	µg/L	1		SW-846 8082A	4/5/19	4/6/19 18:27	JMB
Aroclor-1262 [1]	ND	0.17	µg/L	1		SW-846 8082A	4/5/19	4/6/19 18:27	JMB
Aroclor-1268 [1]	ND	0.17	µg/L	1		SW-846 8082A	4/5/19	4/6/19 18:27	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		85.8	30-150					4/6/19 18:27	
Decachlorobiphenyl [2]		87.7	30-150					4/6/19 18:27	
Tetrachloro-m-xylene [1]		76.5	30-150					4/6/19 18:27	
Tetrachloro-m-xylene [2]		80.8	30-150					4/6/19 18:27	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19D0030

Date Received: 4/1/2019

Field Sample #: V-105 (MW)

Sampled: 4/1/2019 15:00

Sample ID: 19D0030-04

Sample Matrix: Ground Water

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.0	µg/L	1		SW-846 6020B	4/3/19	4/4/19 15:25	QNW
Arsenic	ND	0.40	µg/L	1		SW-846 6020B	4/3/19	4/4/19 15:25	QNW
Barium	150	50	µg/L	5		SW-846 6020B	4/3/19	4/5/19 11:10	QNW
Beryllium	ND	0.40	µg/L	1		SW-846 6020B	4/3/19	4/4/19 15:25	QNW
Cadmium	ND	0.50	µg/L	1		SW-846 6020B	4/3/19	4/4/19 15:25	QNW
Chromium	ND	1.0	µg/L	1		SW-846 6020B	4/3/19	4/4/19 15:25	QNW
Copper	ND	5.0	µg/L	1		SW-846 6020B	4/3/19	4/4/19 15:25	QNW
Lead	ND	1.0	µg/L	1		SW-846 6020B	4/3/19	4/4/19 15:25	QNW
Manganese	870	20	µg/L	20		SW-846 6020B	4/3/19	4/4/19 15:11	QNW
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	4/8/19	4/8/19 14:32	EJB
Nickel	44	5.0	µg/L	1		SW-846 6020B	4/3/19	4/4/19 15:25	QNW
Selenium	ND	5.0	µg/L	1		SW-846 6020B	4/3/19	4/4/19 15:25	QNW
Silver	ND	0.50	µg/L	1		SW-846 6020B	4/3/19	4/4/19 15:25	QNW
Thallium	ND	0.20	µg/L	1		SW-846 6020B	4/3/19	4/4/19 15:25	QNW
Vanadium	ND	5.0	µg/L	1		SW-846 6020B	4/3/19	4/5/19 12:16	QNW
Zinc	ND	10	µg/L	1		SW-846 6020B	4/3/19	4/4/19 15:25	QNW

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Project Location: Wayland, MA

Sample Description:

Work Order: 19D0030

Date Received: 4/1/2019

Field Sample #: V-105 (MW)

Sampled: 4/1/2019 15:00

Sample ID: 19D0030-04

Sample Matrix: Ground Water

**Metals Analyses (Dissolved)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	1.1	0.40	µg/L	1		SW-846 6020B	4/5/19	4/8/19 11:00	QNW



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Project Location: Wayland, MA

Sample Description:

Work Order: 19D0030

Date Received: 4/1/2019

Field Sample #: V-105 (MW)

Sampled: 4/1/2019 15:00

Sample ID: 19D0030-04

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	1.1	0.30	mg/L	1		SM19-22 4500 NH3 C	4/2/19	4/3/19 10:00	EC
Chloride	140	10	mg/L	10		EPA 300.0	4/5/19	4/5/19 11:18	IS
Nitrate as N	7.8	0.20	mg/L	2	MS-07	EPA 300.0	4/2/19	4/2/19 15:14	MMH
Nitrite as N	0.810	0.100	mg/L	1		EPA 300.0	4/2/19	4/2/19 14:29	MMH
Orthophosphate as P	ND	0.050	mg/L	1	W-17	SM 21-22 4500 P E	4/1/19	4/1/19 21:30	IS
Phosphorus, Total	ND	0.062	mg/L	1.25		SM 21-22 4500 P E	4/2/19	4/2/19 14:09	IS
Total Kjeldahl Nitrogen	2.0	1.0	mg/L	1		SM19-22 4500-N Org B,C-NH3 C	4/3/19	4/4/19 9:45	EC
Total Nitrogen	11	0.050	mg/L	1		SM19-22 4500-N Org B,C-NH3 C	4/8/19	4/8/19 7:28	LL

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**Sample Extraction Data**

**Prep Method: EPA 300.0-EPA 300.0**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
19D0030-02 [V-101 (MW)]	B227184	10.0	10.0	04/02/19
19D0030-03 [V-102 (MW)]	B227184	10.0	10.0	04/02/19

**EPA 300.0**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
19D0030-04 [V-105 (MW)]	B227319	10.0	10.0	04/02/19

**EPA 300.0**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
19D0030-04 [V-105 (MW)]	B227332	10.0	10.0	04/02/19

**EPA 300.0**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
19D0030-02 [V-101 (MW)]	B227352	10.0	10.0	04/05/19
19D0030-03 [V-102 (MW)]	B227352	10.0	10.0	04/05/19
19D0030-04 [V-105 (MW)]	B227352	10.0	10.0	04/05/19

**SM 21-22 4500 P E**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
19D0030-02 [V-101 (MW)]	B227187	50.0	50.0	04/01/19
19D0030-03 [V-102 (MW)]	B227187	50.0	50.0	04/01/19
19D0030-04 [V-105 (MW)]	B227187	50.0	50.0	04/01/19

**SM 21-22 4500 P E**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
19D0030-02 [V-101 (MW)]	B227249	50.0	50.0	04/02/19
19D0030-03 [V-102 (MW)]	B227249	50.0	50.0	04/02/19
19D0030-04 [V-105 (MW)]	B227249	50.0	50.0	04/02/19

**SM19-22 4500 NH3 C**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
19D0030-02 [V-101 (MW)]	B227200	100	100	04/02/19
19D0030-03 [V-102 (MW)]	B227200	100	100	04/02/19
19D0030-04 [V-105 (MW)]	B227200	100	100	04/02/19

**SM19-22 4500-N Org B,C-NH3 C**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
19D0030-02 [V-101 (MW)]	B227312	25.0	25.0	04/03/19
19D0030-03 [V-102 (MW)]	B227312	25.0	25.0	04/03/19

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**Sample Extraction Data**

**SM19-22 4500-N Org B,C-NH3 C**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
19D0030-04 [V-105 (MW)]	B227312	25.0	25.0	04/03/19

**SM19-22 4500-N Org B,C-NH3 C**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
19D0030-02 [V-101 (MW)]	B227642	50.0	50.0	04/08/19
19D0030-03 [V-102 (MW)]	B227642	50.0	50.0	04/08/19
19D0030-04 [V-105 (MW)]	B227642	50.0	50.0	04/08/19

**Prep Method: SW-846 3005A-SW-846 6020B**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
19D0030-02 [V-101 (MW)]	B227365	50.0	50.0	04/03/19
19D0030-03 [V-102 (MW)]	B227365	50.0	50.0	04/03/19
19D0030-04 [V-105 (MW)]	B227365	50.0	50.0	04/03/19

**Prep Method: SW-846 3005A Dissolved-SW-846 6020B**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
19D0030-02 [V-101 (MW)]	B227576	10.0	10.0	04/05/19
19D0030-03 [V-102 (MW)]	B227576	10.0	10.0	04/05/19
19D0030-04 [V-105 (MW)]	B227576	10.0	10.0	04/05/19

**Prep Method: SW-846 7470A Prep-SW-846 7470A**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
19D0030-02 [V-101 (MW)]	B227561	6.00	6.00	04/08/19
19D0030-03 [V-102 (MW)]	B227561	6.00	6.00	04/08/19
19D0030-04 [V-105 (MW)]	B227561	6.00	6.00	04/08/19

**Prep Method: SW-846 3510C-SW-846 8082A**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
19D0030-02 [V-101 (MW)]	B227544	130	2.00	04/05/19
19D0030-03 [V-102 (MW)]	B227544	120	2.00	04/05/19
19D0030-04 [V-105 (MW)]	B227544	120	2.00	04/05/19

**Prep Method: SW-846 5030B-SW-846 8260C**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
19D0030-02 [V-101 (MW)]	B227205	5	5.00	04/03/19
19D0030-03 [V-102 (MW)]	B227205	5	5.00	04/03/19
19D0030-04 [V-105 (MW)]	B227205	5	5.00	04/03/19

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

### Sample Extraction Data

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

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
19D0030-02 [V-101 (MW)]	B227556	910	1.00	04/05/19
19D0030-03 [V-102 (MW)]	B227556	1020	1.00	04/05/19
19D0030-04 [V-105 (MW)]	B227556	870	1.00	04/05/19

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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 B227205 - SW-846 5030B**

**Blank (B227205-BLK1)**

Prepared: 04/02/19 Analyzed: 04/03/19

Acetone	ND	10	µg/L							R-05
tert-Amyl Methyl Ether (TAME)	ND	0.50	µg/L							
Benzene	ND	1.0	µg/L							
Bromobenzene	ND	1.0	µg/L							
Bromochloromethane	ND	1.0	µg/L							
Bromodichloromethane	ND	1.0	µg/L							
Bromoform	ND	1.0	µg/L							
Bromomethane	ND	2.0	µg/L							
2-Butanone (MEK)	ND	10	µg/L							
n-Butylbenzene	ND	1.0	µg/L							
sec-Butylbenzene	ND	1.0	µg/L							
tert-Butylbenzene	ND	1.0	µg/L							
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	µg/L							
Carbon Disulfide	ND	5.0	µg/L							
Carbon Tetrachloride	ND	1.0	µg/L							
Chlorobenzene	ND	1.0	µg/L							
Chlorodibromomethane	ND	0.50	µg/L							
Chloroethane	ND	2.0	µg/L							
Chloroform	ND	2.0	µg/L							
Chloromethane	ND	2.0	µg/L							
2-Chlorotoluene	ND	1.0	µg/L							
4-Chlorotoluene	ND	1.0	µg/L							
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	µg/L							
1,2-Dibromoethane (EDB)	ND	0.50	µg/L							
Dibromomethane	ND	1.0	µg/L							
1,2-Dichlorobenzene	ND	1.0	µg/L							
1,3-Dichlorobenzene	ND	1.0	µg/L							
1,4-Dichlorobenzene	ND	1.0	µg/L							
Dichlorodifluoromethane (Freon 12)	ND	2.0	µg/L							
1,1-Dichloroethane	ND	1.0	µg/L							
1,2-Dichloroethane	ND	1.0	µg/L							
1,1-Dichloroethylene	ND	1.0	µg/L							
cis-1,2-Dichloroethylene	ND	1.0	µg/L							
trans-1,2-Dichloroethylene	ND	1.0	µg/L							
1,2-Dichloropropane	ND	1.0	µg/L							
1,3-Dichloropropane	ND	0.50	µg/L							
2,2-Dichloropropane	ND	1.0	µg/L							
1,1-Dichloropropene	ND	0.50	µg/L							
cis-1,3-Dichloropropene	ND	0.40	µg/L							
trans-1,3-Dichloropropene	ND	0.40	µg/L							
Diethyl Ether	ND	2.0	µg/L							
Diisopropyl Ether (DIPE)	ND	0.50	µg/L							
1,4-Dioxane	ND	50	µg/L							V-16
Ethylbenzene	ND	1.0	µg/L							
Hexachlorobutadiene	ND	0.60	µg/L							
2-Hexanone (MBK)	ND	10	µg/L							
Isopropylbenzene (Cumene)	ND	1.0	µg/L							
p-Isopropyltoluene (p-Cymene)	ND	1.0	µg/L							
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L							
Methylene Chloride	ND	5.0	µg/L							
4-Methyl-2-pentanone (MIBK)	ND	10	µg/L							
Naphthalene	ND	2.0	µg/L							

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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 B227205 - SW-846 5030B

Blank (B227205-BLK1)

Prepared: 04/02/19 Analyzed: 04/03/19

n-Propylbenzene	ND	1.0	µg/L							
Styrene	ND	1.0	µg/L							
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L							
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L							
Tetrachloroethylene	ND	1.0	µg/L							
Tetrahydrofuran	ND	2.0	µg/L							
Toluene	ND	1.0	µg/L							
1,2,3-Trichlorobenzene	ND	2.0	µg/L							
1,2,4-Trichlorobenzene	ND	1.0	µg/L							
1,1,1-Trichloroethane	ND	1.0	µg/L							
1,1,2-Trichloroethane	ND	1.0	µg/L							
Trichloroethylene	ND	1.0	µg/L							
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L							
1,2,3-Trichloropropane	ND	2.0	µg/L							
1,2,4-Trimethylbenzene	ND	1.0	µg/L							
1,3,5-Trimethylbenzene	ND	1.0	µg/L							
Vinyl Chloride	ND	2.0	µg/L							
m+p Xylene	ND	2.0	µg/L							
o-Xylene	ND	1.0	µg/L							
Surrogate: 1,2-Dichloroethane-d4	22.0		µg/L	25.0		87.8	70-130			
Surrogate: Toluene-d8	24.6		µg/L	25.0		98.5	70-130			
Surrogate: 4-Bromofluorobenzene	24.6		µg/L	25.0		98.4	70-130			

LCS (B227205-BS1)

Prepared: 04/02/19 Analyzed: 04/03/19

Acetone	148	10	µg/L	100		148	40-160			L-14, R-05 †
tert-Amyl Methyl Ether (TAME)	9.79	0.50	µg/L	10.0		97.9	70-130			
Benzene	9.61	1.0	µg/L	10.0		96.1	70-130			
Bromobenzene	11.9	1.0	µg/L	10.0		119	70-130			
Bromochloromethane	10.1	1.0	µg/L	10.0		101	70-130			
Bromodichloromethane	10.4	1.0	µg/L	10.0		104	70-130			
Bromoform	12.3	1.0	µg/L	10.0		123	70-130			
Bromomethane	7.28	2.0	µg/L	10.0		72.8	40-160			†
2-Butanone (MEK)	92.0	10	µg/L	100		92.0	40-160			†
n-Butylbenzene	11.0	1.0	µg/L	10.0		110	70-130			
sec-Butylbenzene	11.2	1.0	µg/L	10.0		112	70-130			
tert-Butylbenzene	11.0	1.0	µg/L	10.0		110	70-130			
tert-Butyl Ethyl Ether (TBEE)	10.1	0.50	µg/L	10.0		101	70-130			
Carbon Disulfide	12.1	5.0	µg/L	10.0		121	70-130			
Carbon Tetrachloride	9.40	1.0	µg/L	10.0		94.0	70-130			
Chlorobenzene	12.4	1.0	µg/L	10.0		124	70-130			
Chlorodibromomethane	11.6	0.50	µg/L	10.0		116	70-130			
Chloroethane	11.2	2.0	µg/L	10.0		112	70-130			
Chloroform	9.49	2.0	µg/L	10.0		94.9	70-130			
Chloromethane	7.67	2.0	µg/L	10.0		76.7	40-160			†
2-Chlorotoluene	11.4	1.0	µg/L	10.0		114	70-130			
4-Chlorotoluene	12.2	1.0	µg/L	10.0		122	70-130			
1,2-Dibromo-3-chloropropane (DBCP)	8.73	2.0	µg/L	10.0		87.3	70-130			
1,2-Dibromoethane (EDB)	11.1	0.50	µg/L	10.0		111	70-130			
Dibromomethane	11.0	1.0	µg/L	10.0		110	70-130			
1,2-Dichlorobenzene	12.1	1.0	µg/L	10.0		121	70-130			
1,3-Dichlorobenzene	12.2	1.0	µg/L	10.0		122	70-130			
1,4-Dichlorobenzene	11.9	1.0	µg/L	10.0		119	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
<b>Batch B227205 - SW-846 5030B</b>										
<b>LCS (B227205-BS1)</b>										
					Prepared: 04/02/19 Analyzed: 04/03/19					
Dichlorodifluoromethane (Freon 12)	7.25	2.0	µg/L	10.0		72.5	40-160			†
1,1-Dichloroethane	9.74	1.0	µg/L	10.0		97.4	70-130			
1,2-Dichloroethane	8.80	1.0	µg/L	10.0		88.0	70-130			
1,1-Dichloroethylene	10.8	1.0	µg/L	10.0		108	70-130			
cis-1,2-Dichloroethylene	9.70	1.0	µg/L	10.0		97.0	70-130			
trans-1,2-Dichloroethylene	10.0	1.0	µg/L	10.0		100	70-130			
1,2-Dichloropropane	9.97	1.0	µg/L	10.0		99.7	70-130			
1,3-Dichloropropane	10.6	0.50	µg/L	10.0		106	70-130			
2,2-Dichloropropane	9.60	1.0	µg/L	10.0		96.0	70-130			
1,1-Dichloropropene	8.97	0.50	µg/L	10.0		89.7	70-130			
cis-1,3-Dichloropropene	11.5	0.40	µg/L	10.0		115	70-130			
trans-1,3-Dichloropropene	11.7	0.40	µg/L	10.0		117	70-130			
Diethyl Ether	13.0	2.0	µg/L	10.0		130	70-130			
Diisopropyl Ether (DIPE)	10.0	0.50	µg/L	10.0		100	70-130			
1,4-Dioxane	92.3	50	µg/L	100		92.3	40-160			V-16 †
Ethylbenzene	11.5	1.0	µg/L	10.0		115	70-130			
Hexachlorobutadiene	12.6	0.60	µg/L	10.0		126	70-130			
2-Hexanone (MBK)	104	10	µg/L	100		104	40-160			†
Isopropylbenzene (Cumene)	11.8	1.0	µg/L	10.0		118	70-130			
p-Isopropyltoluene (p-Cymene)	11.4	1.0	µg/L	10.0		114	70-130			
Methyl tert-Butyl Ether (MTBE)	10.8	1.0	µg/L	10.0		108	70-130			
Methylene Chloride	11.5	5.0	µg/L	10.0		115	70-130			
4-Methyl-2-pentanone (MIBK)	101	10	µg/L	100		101	40-160			†
Naphthalene	9.77	2.0	µg/L	10.0		97.7	70-130			
n-Propylbenzene	11.6	1.0	µg/L	10.0		116	70-130			
Styrene	12.9	1.0	µg/L	10.0		129	70-130			V-20
1,1,1,2-Tetrachloroethane	12.6	1.0	µg/L	10.0		126	70-130			
1,1,1,2,2-Tetrachloroethane	13.0	0.50	µg/L	10.0		130	70-130			
Tetrachloroethylene	10.9	1.0	µg/L	10.0		109	70-130			
Tetrahydrofuran	10.7	2.0	µg/L	10.0		107	70-130			
Toluene	10.4	1.0	µg/L	10.0		104	70-130			
1,2,3-Trichlorobenzene	10.9	2.0	µg/L	10.0		109	70-130			
1,2,4-Trichlorobenzene	10.4	1.0	µg/L	10.0		104	70-130			
1,1,1-Trichloroethane	9.10	1.0	µg/L	10.0		91.0	70-130			
1,1,2-Trichloroethane	11.4	1.0	µg/L	10.0		114	70-130			
Trichloroethylene	10.4	1.0	µg/L	10.0		104	70-130			
Trichlorofluoromethane (Freon 11)	9.44	2.0	µg/L	10.0		94.4	70-130			
1,2,3-Trichloropropane	11.5	2.0	µg/L	10.0		115	70-130			
1,2,4-Trimethylbenzene	11.3	1.0	µg/L	10.0		113	70-130			
1,3,5-Trimethylbenzene	11.8	1.0	µg/L	10.0		118	70-130			
Vinyl Chloride	11.7	2.0	µg/L	10.0		117	70-130			
m+p Xylene	23.4	2.0	µg/L	20.0		117	70-130			
o-Xylene	12.2	1.0	µg/L	10.0		122	70-130			
Surrogate: 1,2-Dichloroethane-d4	21.9		µg/L	25.0		87.6	70-130			
Surrogate: Toluene-d8	24.4		µg/L	25.0		97.7	70-130			
Surrogate: 4-Bromofluorobenzene	26.1		µg/L	25.0		104	70-130			

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

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 B227205 - SW-846 5030B

LCS Dup (B227205-BSD1)

Prepared: 04/02/19 Analyzed: 04/03/19

Acetone	109	10	µg/L	100		109	40-160	29.9 *	20	R-05 †
tert-Amyl Methyl Ether (TAME)	9.12	0.50	µg/L	10.0		91.2	70-130	7.09	20	
Benzene	9.57	1.0	µg/L	10.0		95.7	70-130	0.417	20	
Bromobenzene	11.4	1.0	µg/L	10.0		114	70-130	3.86	20	
Bromochloromethane	10.0	1.0	µg/L	10.0		100	70-130	0.199	20	
Bromodichloromethane	10.4	1.0	µg/L	10.0		104	70-130	0.577	20	
Bromoform	12.0	1.0	µg/L	10.0		120	70-130	2.47	20	
Bromomethane	7.86	2.0	µg/L	10.0		78.6	40-160	7.66	20	†
2-Butanone (MEK)	81.2	10	µg/L	100		81.2	40-160	12.5	20	†
n-Butylbenzene	10.9	1.0	µg/L	10.0		109	70-130	0.912	20	
sec-Butylbenzene	11.4	1.0	µg/L	10.0		114	70-130	1.06	20	
tert-Butylbenzene	11.1	1.0	µg/L	10.0		111	70-130	0.725	20	
tert-Butyl Ethyl Ether (TBEE)	9.46	0.50	µg/L	10.0		94.6	70-130	6.35	20	
Carbon Disulfide	11.9	5.0	µg/L	10.0		119	70-130	1.67	20	
Carbon Tetrachloride	9.35	1.0	µg/L	10.0		93.5	70-130	0.533	20	
Chlorobenzene	12.2	1.0	µg/L	10.0		122	70-130	1.30	20	
Chlorodibromomethane	11.4	0.50	µg/L	10.0		114	70-130	1.91	20	
Chloroethane	10.6	2.0	µg/L	10.0		106	70-130	5.71	20	
Chloroform	9.51	2.0	µg/L	10.0		95.1	70-130	0.211	20	
Chloromethane	7.64	2.0	µg/L	10.0		76.4	40-160	0.392	20	†
2-Chlorotoluene	11.1	1.0	µg/L	10.0		111	70-130	1.87	20	
4-Chlorotoluene	11.9	1.0	µg/L	10.0		119	70-130	2.99	20	
1,2-Dibromo-3-chloropropane (DBCP)	8.02	2.0	µg/L	10.0		80.2	70-130	8.48	20	
1,2-Dibromoethane (EDB)	10.9	0.50	µg/L	10.0		109	70-130	1.91	20	
Dibromomethane	10.8	1.0	µg/L	10.0		108	70-130	1.66	20	
1,2-Dichlorobenzene	12.0	1.0	µg/L	10.0		120	70-130	0.747	20	
1,3-Dichlorobenzene	11.9	1.0	µg/L	10.0		119	70-130	2.57	20	
1,4-Dichlorobenzene	11.7	1.0	µg/L	10.0		117	70-130	1.70	20	
Dichlorodifluoromethane (Freon 12)	7.42	2.0	µg/L	10.0		74.2	40-160	2.32	20	†
1,1-Dichloroethane	9.62	1.0	µg/L	10.0		96.2	70-130	1.24	20	
1,2-Dichloroethane	8.60	1.0	µg/L	10.0		86.0	70-130	2.30	20	
1,1-Dichloroethylene	10.8	1.0	µg/L	10.0		108	70-130	0.834	20	
cis-1,2-Dichloroethylene	9.74	1.0	µg/L	10.0		97.4	70-130	0.412	20	
trans-1,2-Dichloroethylene	9.98	1.0	µg/L	10.0		99.8	70-130	0.400	20	
1,2-Dichloropropane	9.47	1.0	µg/L	10.0		94.7	70-130	5.14	20	
1,3-Dichloropropane	10.4	0.50	µg/L	10.0		104	70-130	1.14	20	
2,2-Dichloropropane	9.59	1.0	µg/L	10.0		95.9	70-130	0.104	20	
1,1-Dichloropropene	8.94	0.50	µg/L	10.0		89.4	70-130	0.335	20	
cis-1,3-Dichloropropene	11.2	0.40	µg/L	10.0		112	70-130	1.94	20	
trans-1,3-Dichloropropene	11.8	0.40	µg/L	10.0		118	70-130	0.594	20	
Diethyl Ether	12.7	2.0	µg/L	10.0		127	70-130	2.10	20	
Diisopropyl Ether (DIPE)	9.65	0.50	µg/L	10.0		96.5	70-130	3.66	20	
1,4-Dioxane	95.5	50	µg/L	100		95.5	40-160	3.47	20	V-16 †
Ethylbenzene	11.2	1.0	µg/L	10.0		112	70-130	2.46	20	
Hexachlorobutadiene	12.4	0.60	µg/L	10.0		124	70-130	1.28	20	
2-Hexanone (MBK)	93.6	10	µg/L	100		93.6	40-160	10.4	20	†
Isopropylbenzene (Cumene)	11.6	1.0	µg/L	10.0		116	70-130	1.28	20	
p-Isopropyltoluene (p-Cymene)	11.2	1.0	µg/L	10.0		112	70-130	1.68	20	
Methyl tert-Butyl Ether (MTBE)	10.3	1.0	µg/L	10.0		103	70-130	5.12	20	
Methylene Chloride	11.5	5.0	µg/L	10.0		115	70-130	0.174	20	
4-Methyl-2-pentanone (MIBK)	94.2	10	µg/L	100		94.2	40-160	6.57	20	†
Naphthalene	9.14	2.0	µg/L	10.0		91.4	70-130	6.66	20	



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

**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
<b>Batch B227205 - SW-846 5030B</b>										
<b>LCS Dup (B227205-BSD1)</b>										
					Prepared: 04/02/19 Analyzed: 04/03/19					
n-Propylbenzene	11.4	1.0	µg/L	10.0		114	70-130	1.92	20	
Styrene	12.9	1.0	µg/L	10.0		129	70-130	0.0775	20	V-20
1,1,1,2-Tetrachloroethane	12.3	1.0	µg/L	10.0		123	70-130	2.97	20	
1,1,2,2-Tetrachloroethane	12.1	0.50	µg/L	10.0		121	70-130	7.73	20	
Tetrachloroethylene	10.7	1.0	µg/L	10.0		107	70-130	1.75	20	
Tetrahydrofuran	9.26	2.0	µg/L	10.0		92.6	70-130	14.3	20	
Toluene	10.3	1.0	µg/L	10.0		103	70-130	0.677	20	
1,2,3-Trichlorobenzene	10.5	2.0	µg/L	10.0		105	70-130	3.82	20	
1,2,4-Trichlorobenzene	9.88	1.0	µg/L	10.0		98.8	70-130	5.51	20	
1,1,1-Trichloroethane	9.00	1.0	µg/L	10.0		90.0	70-130	1.10	20	
1,1,2-Trichloroethane	11.4	1.0	µg/L	10.0		114	70-130	0.00	20	
Trichloroethylene	9.95	1.0	µg/L	10.0		99.5	70-130	4.04	20	
Trichlorofluoromethane (Freon 11)	9.27	2.0	µg/L	10.0		92.7	70-130	1.82	20	
1,2,3-Trichloropropane	11.1	2.0	µg/L	10.0		111	70-130	4.07	20	
1,2,4-Trimethylbenzene	11.1	1.0	µg/L	10.0		111	70-130	1.79	20	
1,3,5-Trimethylbenzene	11.4	1.0	µg/L	10.0		114	70-130	3.18	20	
Vinyl Chloride	12.5	2.0	µg/L	10.0		125	70-130	6.70	20	
m+p Xylene	22.9	2.0	µg/L	20.0		114	70-130	2.20	20	
o-Xylene	12.0	1.0	µg/L	10.0		120	70-130	1.82	20	
Surrogate: 1,2-Dichloroethane-d4	22.2		µg/L	25.0		89.0	70-130			
Surrogate: Toluene-d8	24.8		µg/L	25.0		99.4	70-130			
Surrogate: 4-Bromofluorobenzene	25.8		µg/L	25.0		103	70-130			

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

**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 B227556 - SW-846 3510C**

**Blank (B227556-BLK1)**

Prepared: 04/05/19 Analyzed: 04/06/19

Acenaphthene	ND	5.0	µg/L							
Acenaphthylene	ND	5.0	µg/L							
Acetophenone	ND	10	µg/L							
Aniline	ND	5.0	µg/L							V-34
Anthracene	ND	5.0	µg/L							
Benzo(a)anthracene	ND	5.0	µg/L							
Benzo(a)pyrene	ND	5.0	µg/L							
Benzo(b)fluoranthene	ND	5.0	µg/L							
Benzo(g,h,i)perylene	ND	5.0	µg/L							
Benzo(k)fluoranthene	ND	5.0	µg/L							
Bis(2-chloroethoxy)methane	ND	10	µg/L							
Bis(2-chloroethyl)ether	ND	10	µg/L							
Bis(2-chloroisopropyl)ether	ND	10	µg/L							
Bis(2-Ethylhexyl)phthalate	ND	10	µg/L							
4-Bromophenylphenylether	ND	10	µg/L							
Butylbenzylphthalate	ND	10	µg/L							
4-Chloroaniline	ND	10	µg/L							V-34
2-Chloronaphthalene	ND	10	µg/L							
2-Chlorophenol	ND	10	µg/L							
Chrysene	ND	5.0	µg/L							
Dibenz(a,h)anthracene	ND	5.0	µg/L							
Dibenzofuran	ND	5.0	µg/L							
Di-n-butylphthalate	ND	10	µg/L							
1,2-Dichlorobenzene	ND	5.0	µg/L							
1,3-Dichlorobenzene	ND	5.0	µg/L							
1,4-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							
2,4-Dinitrophenol	ND	10	µg/L							
2,4-Dinitrotoluene	ND	10	µg/L							
2,6-Dinitrotoluene	ND	10	µg/L							
Di-n-octylphthalate	ND	10	µg/L							
1,2-Diphenylhydrazine/Azobenzene	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							
Hexachloroethane	ND	10	µg/L							
Indeno(1,2,3-cd)pyrene	ND	5.0	µg/L							
Isophorone	ND	10	µg/L							
2-Methylnaphthalene	ND	5.0	µg/L							
2-Methylphenol	ND	10	µg/L							
3/4-Methylphenol	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							
Pentachlorophenol	ND	10	µg/L							
Phenanthrene	ND	5.0	µg/L							

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 B227556 - SW-846 3510C

Blank (B227556-BLK1)

Prepared: 04/05/19 Analyzed: 04/06/19

Phenol	ND	10	µg/L							
Pyrene	ND	5.0	µg/L							
Pyridine	ND	5.0	µg/L							
1,2,4-Trichlorobenzene	ND	5.0	µg/L							
2,4,5-Trichlorophenol	ND	10	µg/L							
2,4,6-Trichlorophenol	ND	10	µg/L							
Surrogate: 2-Fluorophenol	111		µg/L	200		55.3	15-110			
Surrogate: Phenol-d6	81.8		µg/L	200		40.9	15-110			
Surrogate: Nitrobenzene-d5	85.8		µg/L	100		85.8	30-130			
Surrogate: 2-Fluorobiphenyl	84.7		µg/L	100		84.7	30-130			
Surrogate: 2,4,6-Tribromophenol	190		µg/L	200		95.2	15-110			
Surrogate: p-Terphenyl-d14	99.8		µg/L	100		99.8	30-130			

LCS (B227556-BS1)

Prepared: 04/05/19 Analyzed: 04/06/19

Acenaphthene	39.9	5.0	µg/L	50.0		79.8	40-140			
Acenaphthylene	39.9	5.0	µg/L	50.0		79.8	40-140			
Acetophenone	38.7	10	µg/L	50.0		77.4	40-140			
Aniline	35.4	5.0	µg/L	50.0		70.9	40-140			V-34
Anthracene	40.9	5.0	µg/L	50.0		81.9	40-140			
Benzo(a)anthracene	41.6	5.0	µg/L	50.0		83.2	40-140			
Benzo(a)pyrene	43.7	5.0	µg/L	50.0		87.4	40-140			
Benzo(b)fluoranthene	40.6	5.0	µg/L	50.0		81.3	40-140			
Benzo(g,h,i)perylene	44.9	5.0	µg/L	50.0		89.7	40-140			
Benzo(k)fluoranthene	41.1	5.0	µg/L	50.0		82.2	40-140			
Bis(2-chloroethoxy)methane	46.6	10	µg/L	50.0		93.2	40-140			
Bis(2-chloroethyl)ether	40.6	10	µg/L	50.0		81.2	40-140			
Bis(2-chloroisopropyl)ether	45.4	10	µg/L	50.0		90.7	40-140			
Bis(2-Ethylhexyl)phthalate	45.9	10	µg/L	50.0		91.8	40-140			
4-Bromophenylphenylether	39.6	10	µg/L	50.0		79.3	40-140			
Butylbenzylphthalate	46.0	10	µg/L	50.0		91.9	40-140			
4-Chloroaniline	42.2	10	µg/L	50.0		84.5	15-140			V-34 †
2-Chloronaphthalene	34.6	10	µg/L	50.0		69.2	40-140			
2-Chlorophenol	39.2	10	µg/L	50.0		78.5	30-130			
Chrysene	42.3	5.0	µg/L	50.0		84.6	40-140			
Dibenz(a,h)anthracene	43.2	5.0	µg/L	50.0		86.5	40-140			
Dibenzofuran	40.2	5.0	µg/L	50.0		80.4	40-140			
Di-n-butylphthalate	40.6	10	µg/L	50.0		81.3	40-140			
1,2-Dichlorobenzene	33.2	5.0	µg/L	50.0		66.4	40-140			
1,3-Dichlorobenzene	31.8	5.0	µg/L	50.0		63.5	40-140			
1,4-Dichlorobenzene	32.8	5.0	µg/L	50.0		65.6	40-140			
3,3-Dichlorobenzidine	52.5	10	µg/L	50.0		105	40-140			
2,4-Dichlorophenol	42.7	10	µg/L	50.0		85.4	30-130			
Diethylphthalate	41.1	10	µg/L	50.0		82.3	40-140			
2,4-Dimethylphenol	39.1	10	µg/L	50.0		78.3	30-130			
Dimethylphthalate	43.9	10	µg/L	50.0		87.7	40-140			
2,4-Dinitrophenol	49.7	10	µg/L	50.0		99.3	15-140			†
2,4-Dinitrotoluene	45.2	10	µg/L	50.0		90.5	40-140			
2,6-Dinitrotoluene	45.7	10	µg/L	50.0		91.4	40-140			
Di-n-octylphthalate	43.9	10	µg/L	50.0		87.9	40-140			
1,2-Diphenylhydrazine/Azobenzene	38.6	10	µg/L	50.0		77.2	40-140			
Fluoranthene	40.9	5.0	µg/L	50.0		81.8	40-140			
Fluorene	41.2	5.0	µg/L	50.0		82.4	40-140			

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

**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 B227556 - SW-846 3510C**

**LCS (B227556-BS1)**

Prepared: 04/05/19 Analyzed: 04/06/19

Hexachlorobenzene	38.6	10	µg/L	50.0		77.2	40-140			
Hexachlorobutadiene	34.0	10	µg/L	50.0		67.9	40-140			
Hexachloroethane	32.3	10	µg/L	50.0		64.6	40-140			
Indeno(1,2,3-cd)pyrene	44.6	5.0	µg/L	50.0		89.3	40-140			
Isophorone	41.3	10	µg/L	50.0		82.7	40-140			
2-Methylnaphthalene	41.4	5.0	µg/L	50.0		82.7	40-140			
2-Methylphenol	36.2	10	µg/L	50.0		72.3	30-130			
3/4-Methylphenol	33.2	10	µg/L	50.0		66.3	30-130			
Naphthalene	37.7	5.0	µg/L	50.0		75.4	40-140			
Nitrobenzene	37.6	10	µg/L	50.0		75.2	40-140			
2-Nitrophenol	44.0	10	µg/L	50.0		88.1	30-130			
4-Nitrophenol	23.0	10	µg/L	50.0		46.0	15-140			†
Pentachlorophenol	44.5	10	µg/L	50.0		89.1	30-130			
Phenanthrene	40.7	5.0	µg/L	50.0		81.4	40-140			
Phenol	18.8	10	µg/L	50.0		37.6	15-140			†
Pyrene	42.6	5.0	µg/L	50.0		85.2	40-140			
Pyridine	22.1	5.0	µg/L	50.0		44.2	10-140			†
1,2,4-Trichlorobenzene	35.6	5.0	µg/L	50.0		71.2	40-140			
2,4,5-Trichlorophenol	41.3	10	µg/L	50.0		82.6	30-130			
2,4,6-Trichlorophenol	41.6	10	µg/L	50.0		83.1	30-130			
Surrogate: 2-Fluorophenol	104		µg/L	200		51.8	15-110			
Surrogate: Phenol-d6	78.4		µg/L	200		39.2	15-110			
Surrogate: Nitrobenzene-d5	84.4		µg/L	100		84.4	30-130			
Surrogate: 2-Fluorobiphenyl	84.2		µg/L	100		84.2	30-130			
Surrogate: 2,4,6-Tribromophenol	197		µg/L	200		98.5	15-110			
Surrogate: p-Terphenyl-d14	92.2		µg/L	100		92.2	30-130			

**LCS Dup (B227556-BS1)**

Prepared: 04/05/19 Analyzed: 04/06/19

Acenaphthene	39.4	5.0	µg/L	50.0		78.8	40-140	1.34	20	
Acenaphthylene	38.3	5.0	µg/L	50.0		76.5	40-140	4.20	20	
Acetophenone	37.5	10	µg/L	50.0		75.0	40-140	3.12	20	
Aniline	32.6	5.0	µg/L	50.0		65.1	40-140	8.50	20	V-34
Anthracene	40.9	5.0	µg/L	50.0		81.8	40-140	0.0489	20	
Benzo(a)anthracene	41.7	5.0	µg/L	50.0		83.4	40-140	0.336	20	
Benzo(a)pyrene	43.0	5.0	µg/L	50.0		86.0	40-140	1.64	20	
Benzo(b)fluoranthene	39.9	5.0	µg/L	50.0		79.7	40-140	1.96	20	
Benzo(g,h,i)perylene	43.6	5.0	µg/L	50.0		87.3	40-140	2.76	20	
Benzo(k)fluoranthene	40.6	5.0	µg/L	50.0		81.1	40-140	1.40	20	
Bis(2-chloroethoxy)methane	45.9	10	µg/L	50.0		91.8	40-140	1.47	20	
Bis(2-chloroethyl)ether	38.8	10	µg/L	50.0		77.5	40-140	4.56	20	
Bis(2-chloroisopropyl)ether	43.3	10	µg/L	50.0		86.7	40-140	4.60	20	
Bis(2-Ethylhexyl)phthalate	46.3	10	µg/L	50.0		92.5	40-140	0.825	20	
4-Bromophenylphenylether	40.2	10	µg/L	50.0		80.3	40-140	1.33	20	
Butylbenzylphthalate	45.8	10	µg/L	50.0		91.6	40-140	0.349	20	
4-Chloroaniline	39.4	10	µg/L	50.0		78.8	15-140	6.88	20	V-34 †
2-Chloronaphthalene	32.5	10	µg/L	50.0		65.0	40-140	6.29	20	
2-Chlorophenol	36.2	10	µg/L	50.0		72.4	30-130	8.03	20	
Chrysene	41.9	5.0	µg/L	50.0		83.7	40-140	0.998	20	
Dibenz(a,h)anthracene	41.8	5.0	µg/L	50.0		83.5	40-140	3.46	20	
Dibenzofuran	40.5	5.0	µg/L	50.0		81.0	40-140	0.669	20	
Di-n-butylphthalate	42.1	10	µg/L	50.0		84.3	40-140	3.60	20	
1,2-Dichlorobenzene	32.6	5.0	µg/L	50.0		65.1	40-140	1.98	20	

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

**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
<b>Batch B227556 - SW-846 3510C</b>										
<b>LCS Dup (B227556-BSD1)</b>										
					Prepared: 04/05/19 Analyzed: 04/06/19					
1,3-Dichlorobenzene	31.3	5.0	µg/L	50.0		62.6	40-140	1.55	20	
1,4-Dichlorobenzene	31.5	5.0	µg/L	50.0		63.0	40-140	4.04	20	
3,3-Dichlorobenzidine	51.5	10	µg/L	50.0		103	40-140	1.90	20	
2,4-Dichlorophenol	41.4	10	µg/L	50.0		82.9	30-130	3.00	20	
Diethylphthalate	41.0	10	µg/L	50.0		82.1	40-140	0.243	20	
2,4-Dimethylphenol	37.6	10	µg/L	50.0		75.3	30-130	3.91	20	
Dimethylphthalate	42.5	10	µg/L	50.0		85.1	40-140	3.06	20	
2,4-Dinitrophenol	50.2	10	µg/L	50.0		100	15-140	1.10	20	†
2,4-Dinitrotoluene	44.9	10	µg/L	50.0		89.8	40-140	0.776	20	
2,6-Dinitrotoluene	46.1	10	µg/L	50.0		92.2	40-140	0.784	20	
Di-n-octylphthalate	44.8	10	µg/L	50.0		89.6	40-140	2.01	20	
1,2-Diphenylhydrazine/Azobenzene	38.9	10	µg/L	50.0		77.8	40-140	0.852	20	
Fluoranthene	41.6	5.0	µg/L	50.0		83.1	40-140	1.58	20	
Fluorene	40.5	5.0	µg/L	50.0		81.1	40-140	1.66	20	
Hexachlorobenzene	39.4	10	µg/L	50.0		78.9	40-140	2.18	20	
Hexachlorobutadiene	34.7	10	µg/L	50.0		69.5	40-140	2.27	20	
Hexachloroethane	32.5	10	µg/L	50.0		65.0	40-140	0.648	20	
Indeno(1,2,3-cd)pyrene	43.7	5.0	µg/L	50.0		87.4	40-140	2.13	20	
Isophorone	40.8	10	µg/L	50.0		81.7	40-140	1.19	20	
2-Methylnaphthalene	40.6	5.0	µg/L	50.0		81.2	40-140	1.93	20	
2-Methylphenol	34.7	10	µg/L	50.0		69.4	30-130	4.21	20	
3/4-Methylphenol	31.5	10	µg/L	50.0		63.0	30-130	5.20	20	
Naphthalene	37.0	5.0	µg/L	50.0		74.1	40-140	1.71	20	
Nitrobenzene	37.2	10	µg/L	50.0		74.3	40-140	1.23	20	
2-Nitrophenol	43.0	10	µg/L	50.0		86.1	30-130	2.30	20	
4-Nitrophenol	23.1	10	µg/L	50.0		46.3	15-140	0.607	20	†
Pentachlorophenol	44.2	10	µg/L	50.0		88.5	30-130	0.676	20	
Phenanthrene	40.2	5.0	µg/L	50.0		80.4	40-140	1.29	20	
Phenol	17.6	10	µg/L	50.0		35.1	15-140	6.82	20	†
Pyrene	42.8	5.0	µg/L	50.0		85.6	40-140	0.375	20	
Pyridine	19.6	5.0	µg/L	50.0		39.2	10-140	12.0	50	† ‡
1,2,4-Trichlorobenzene	35.3	5.0	µg/L	50.0		70.6	40-140	0.846	20	
2,4,5-Trichlorophenol	40.1	10	µg/L	50.0		80.2	30-130	3.00	20	
2,4,6-Trichlorophenol	42.0	10	µg/L	50.0		84.1	30-130	1.15	20	
Surrogate: 2-Fluorophenol	97.5		µg/L	200		48.8	15-110			
Surrogate: Phenol-d6	70.9		µg/L	200		35.4	15-110			
Surrogate: Nitrobenzene-d5	79.4		µg/L	100		79.4	30-130			
Surrogate: 2-Fluorobiphenyl	79.8		µg/L	100		79.8	30-130			
Surrogate: 2,4,6-Tribromophenol	194		µg/L	200		97.2	15-110			
Surrogate: p-Terphenyl-d14	92.3		µg/L	100		92.3	30-130			

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

**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 B227544 - SW-846 3510C**

**Blank (B227544-BLK1)**

Prepared: 04/05/19 Analyzed: 04/06/19

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							
Aroclor-1262	ND	0.10	µg/L							
Aroclor-1262 [2C]	ND	0.10	µg/L							
Aroclor-1268	ND	0.10	µg/L							
Aroclor-1268 [2C]	ND	0.10	µg/L							
Surrogate: Decachlorobiphenyl	1.48		µg/L	2.00		73.8	30-150			
Surrogate: Decachlorobiphenyl [2C]	1.48		µg/L	2.00		73.9	30-150			
Surrogate: Tetrachloro-m-xylene	1.16		µg/L	2.00		58.1	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	1.19		µg/L	2.00		59.3	30-150			

**LCS (B227544-BS1)**

Prepared: 04/05/19 Analyzed: 04/06/19

Aroclor-1016	0.42	0.20	µg/L	0.500		85.0	40-140			
Aroclor-1016 [2C]	0.42	0.20	µg/L	0.500		84.6	40-140			
Aroclor-1260	0.40	0.20	µg/L	0.500		79.4	40-140			
Aroclor-1260 [2C]	0.41	0.20	µg/L	0.500		82.3	40-140			
Surrogate: Decachlorobiphenyl	1.73		µg/L	2.00		86.5	30-150			
Surrogate: Decachlorobiphenyl [2C]	1.75		µg/L	2.00		87.3	30-150			
Surrogate: Tetrachloro-m-xylene	1.40		µg/L	2.00		70.2	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	1.43		µg/L	2.00		71.6	30-150			

**LCS Dup (B227544-BSD1)**

Prepared: 04/05/19 Analyzed: 04/06/19

Aroclor-1016	0.41	0.20	µg/L	0.500		81.2	40-140	4.53	20	
Aroclor-1016 [2C]	0.42	0.20	µg/L	0.500		83.2	40-140	1.67	20	
Aroclor-1260	0.38	0.20	µg/L	0.500		76.2	40-140	4.17	20	
Aroclor-1260 [2C]	0.40	0.20	µg/L	0.500		79.5	40-140	3.52	20	
Surrogate: Decachlorobiphenyl	1.67		µg/L	2.00		83.3	30-150			
Surrogate: Decachlorobiphenyl [2C]	1.73		µg/L	2.00		86.3	30-150			
Surrogate: Tetrachloro-m-xylene	1.40		µg/L	2.00		69.9	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	1.44		µg/L	2.00		71.9	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
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**Batch B227365 - SW-846 3005A**

**Blank (B227365-BLK1)**

Prepared: 04/03/19 Analyzed: 04/04/19

Antimony	ND	1.0	µg/L							
Arsenic	ND	0.40	µg/L							
Barium	ND	10	µg/L							
Beryllium	ND	0.40	µg/L							
Cadmium	ND	0.50	µg/L							
Chromium	ND	1.0	µg/L							
Copper	ND	5.0	µg/L							
Lead	ND	1.0	µg/L							
Manganese	ND	1.0	µg/L							
Nickel	ND	5.0	µg/L							
Selenium	ND	5.0	µg/L							
Silver	ND	0.50	µg/L							
Thallium	ND	0.20	µg/L							
Vanadium	ND	5.0	µg/L							
Zinc	ND	10	µg/L							

**LCS (B227365-BS1)**

Prepared: 04/03/19 Analyzed: 04/04/19

Antimony	503	10	µg/L	500		101	80-120			
Arsenic	501	4.0	µg/L	500		100	80-120			
Barium	497	100	µg/L	500		99.5	80-120			
Beryllium	468	4.0	µg/L	500		93.7	80-120			
Cadmium	503	5.0	µg/L	500		101	80-120			
Chromium	501	10	µg/L	500		100	80-120			
Copper	1050	50	µg/L	1000		105	80-120			
Lead	520	10	µg/L	500		104	80-120			
Manganese	529	10	µg/L	500		106	80-120			
Nickel	518	50	µg/L	500		104	80-120			
Selenium	492	50	µg/L	500		98.5	80-120			
Silver	473	5.0	µg/L	500		94.7	80-120			
Thallium	507	2.0	µg/L	500		101	80-120			
Vanadium	534	50	µg/L	500		107	80-120			
Zinc	1000	100	µg/L	1000		100	80-120			

**LCS Dup (B227365-BSD1)**

Prepared: 04/03/19 Analyzed: 04/04/19

Antimony	525	10	µg/L	500		105	80-120	4.31	20	
Arsenic	527	4.0	µg/L	500		105	80-120	4.99	20	
Barium	521	100	µg/L	500		104	80-120	4.62	20	
Beryllium	508	4.0	µg/L	500		102	80-120	8.08	20	
Cadmium	522	5.0	µg/L	500		104	80-120	3.84	20	
Chromium	522	10	µg/L	500		104	80-120	4.05	20	
Copper	1100	50	µg/L	1000		110	80-120	4.66	20	
Lead	537	10	µg/L	500		107	80-120	3.22	20	
Manganese	551	10	µg/L	500		110	80-120	4.06	20	
Nickel	542	50	µg/L	500		108	80-120	4.56	20	
Selenium	520	50	µg/L	500		104	80-120	5.40	20	
Silver	491	5.0	µg/L	500		98.3	80-120	3.74	20	
Thallium	523	2.0	µg/L	500		105	80-120	3.02	20	
Vanadium	562	50	µg/L	500		112	80-120	5.03	20	
Zinc	1040	100	µg/L	1000		104	80-120	3.65	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 B227365 - SW-846 3005A**

<b>Duplicate (B227365-DUP1)</b>		<b>Source: 19D0030-02</b>			Prepared: 04/03/19 Analyzed: 04/04/19					
Antimony	ND	1.0	µg/L		ND			NC	20	
Arsenic	ND	0.40	µg/L		ND			NC	20	
Barium	93.0	10	µg/L		93.2			0.253	20	
Beryllium	ND	0.40	µg/L		ND			NC	20	
Cadmium	0.529	0.50	µg/L		0.522			1.33	20	
Chromium	ND	1.0	µg/L		ND			NC	20	
Copper	5.13	5.0	µg/L		5.13			0.00828	20	
Lead	ND	1.0	µg/L		ND			NC	20	
Manganese	4870	100	µg/L		4360			11.0	20	
Nickel	16.8	5.0	µg/L		16.6			1.46	20	
Selenium	ND	5.0	µg/L		ND			NC	20	
Silver	ND	0.50	µg/L		ND			NC	20	
Thallium	ND	0.20	µg/L		ND			NC	20	
Vanadium	ND	5.0	µg/L		ND			NC	20	
Zinc	ND	10	µg/L		ND			NC	20	

<b>Matrix Spike (B227365-MS1)</b>		<b>Source: 19D0030-02</b>			Prepared: 04/03/19 Analyzed: 04/04/19					
Antimony	534	10	µg/L	500	ND	107		75-125		
Arsenic	532	4.0	µg/L	500	ND	106		75-125		
Barium	618	100	µg/L	500	93.2	105		75-125		
Beryllium	535	4.0	µg/L	500	ND	107		75-125		
Cadmium	526	5.0	µg/L	500	ND	105		75-125		
Chromium	513	10	µg/L	500	ND	103		75-125		
Copper	1060	50	µg/L	1000	ND	106		75-125		
Lead	551	10	µg/L	500	ND	110		75-125		
<b>Manganese</b>	5000	100	µg/L	500	4360	<b>128</b>	*	75-125		MS-19
Nickel	544	50	µg/L	500	16.6	105		75-125		
Selenium	520	50	µg/L	500	ND	104		75-125		
Silver	468	5.0	µg/L	500	ND	93.7		75-125		
Thallium	540	2.0	µg/L	500	ND	108		75-125		
Vanadium	585	50	µg/L	500	ND	117		75-125		
Zinc	1050	100	µg/L	1000	ND	105		75-125		

**Batch B227561 - SW-846 7470A Prep**

<b>Blank (B227561-BLK1)</b>		Prepared & Analyzed: 04/08/19								
Mercury	ND	0.00010	mg/L							
<b>LCS (B227561-BS1)</b>		Prepared & Analyzed: 04/08/19								
Mercury	0.00379	0.00010	mg/L	0.00400		94.7		80-120		
<b>LCS Dup (B227561-BSD1)</b>		Prepared & Analyzed: 04/08/19								
Mercury	0.00381	0.00010	mg/L	0.00400		95.2		80-120	0.563	20



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**QUALITY CONTROL**

**Metals Analyses (Dissolved) - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B227576 - SW-846 3005A Dissolved</b>										
<b>Blank (B227576-BLK1)</b>				Prepared: 04/05/19 Analyzed: 04/08/19						
Arsenic	ND	0.40	µg/L							
<b>LCS (B227576-BS1)</b>				Prepared: 04/05/19 Analyzed: 04/08/19						
Arsenic	41.3	0.40	µg/L	40.0		103	80-120			

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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
<b>Batch B227184 - EPA 300.0</b>										
<b>Blank (B227184-BLK1)</b>										
				Prepared & Analyzed: 04/02/19						
Nitrate as N	ND	0.10	mg/L							
Nitrite as N	ND	0.100	mg/L							
<b>LCS (B227184-BS1)</b>										
				Prepared & Analyzed: 04/02/19						
Nitrate as N	0.92	0.10	mg/L	1.00		92.2	90-110			
Nitrite as N	0.977	0.100	mg/L	1.00		97.7	90-110			
<b>LCS Dup (B227184-BSD1)</b>										
				Prepared & Analyzed: 04/02/19						
Nitrate as N	0.91	0.10	mg/L	1.00		91.5	90-110	0.752	20	
Nitrite as N	0.973	0.100	mg/L	1.00		97.3	90-110	0.410	20	
<b>Batch B227187 - SM 21-22 4500 P E</b>										
<b>Blank (B227187-BLK1)</b>										
				Prepared & Analyzed: 04/01/19						
Orthophosphate as P	ND	0.050	mg/L							
<b>LCS (B227187-BS1)</b>										
				Prepared & Analyzed: 04/01/19						
Orthophosphate as P	0.18	0.050	mg/L	0.170		105	72-122			
<b>LCS Dup (B227187-BSD1)</b>										
				Prepared & Analyzed: 04/01/19						
Orthophosphate as P	0.20	0.050	mg/L	0.170		118	72-122	12.3 *	10.6	R-05
<b>Duplicate (B227187-DUP1)</b>										
				Source: 19D0030-04			Prepared & Analyzed: 04/01/19			
Orthophosphate as P	ND	0.050	mg/L		ND			NC	17	
<b>Matrix Spike (B227187-MS1)</b>										
				Source: 19D0030-04			Prepared & Analyzed: 04/01/19			
Orthophosphate as P	0.30	0.050	mg/L	0.300	ND	101	55.9-148			
<b>Batch B227200 - SM19-22 4500 NH3 C</b>										
<b>Blank (B227200-BLK1)</b>										
				Prepared: 04/02/19 Analyzed: 04/03/19						
Ammonia as N	ND	0.30	mg/L							
<b>LCS (B227200-BS1)</b>										
				Prepared: 04/02/19 Analyzed: 04/03/19						
Ammonia as N	4.8	0.30	mg/L	5.00		95.8	81.5-113			
<b>LCS Dup (B227200-BSD1)</b>										
				Prepared: 04/02/19 Analyzed: 04/03/19						
Ammonia as N	4.8	0.30	mg/L	5.00		95.8	81.5-113	0.00	11.4	
<b>Batch B227249 - SM 21-22 4500 P E</b>										
<b>Blank (B227249-BLK1)</b>										
				Prepared & Analyzed: 04/02/19						
Phosphorus, Total	ND	0.050	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
<b>Batch B227249 - SM 21-22 4500 P E</b>										
<b>LCS (B227249-BS1)</b>				Prepared & Analyzed: 04/02/19						
Phosphorus, Total	0.21	0.050	mg/L	0.205		101	86.5-124			
<b>LCS Dup (B227249-BSD1)</b>				Prepared & Analyzed: 04/02/19						
Phosphorus, Total	0.24	0.050	mg/L	0.205		116	86.5-124	13.8	*	11 R-05
<b>Duplicate (B227249-DUP1)</b>				Source: 19D0030-04			Prepared & Analyzed: 04/02/19			
Phosphorus, Total	ND	0.062	mg/L		ND			NC	38.5	
<b>Matrix Spike (B227249-MS1)</b>				Source: 19D0030-04			Prepared & Analyzed: 04/02/19			
Phosphorus, Total	0.41	0.062	mg/L	0.300	ND	136	28.2-163			
<b>Batch B227312 - SM19-22 4500-N Org B,C-NH3 C</b>										
<b>Blank (B227312-BLK1)</b>				Prepared: 04/03/19 Analyzed: 04/04/19						
Total Kjeldahl Nitrogen	ND	1.0	mg/L							
<b>LCS (B227312-BS1)</b>				Prepared: 04/03/19 Analyzed: 04/04/19						
Total Kjeldahl Nitrogen	19	1.0	mg/L	20.0		95.8	75-117			
<b>Batch B227319 - EPA 300.0</b>										
<b>Blank (B227319-BLK1)</b>				Prepared & Analyzed: 04/02/19						
Nitrate as N	ND	0.10	mg/L							
<b>LCS (B227319-BS1)</b>				Prepared & Analyzed: 04/02/19						
Nitrate as N	0.98	0.10	mg/L	1.00		97.8	90-110			
<b>LCS Dup (B227319-BSD1)</b>				Prepared & Analyzed: 04/02/19						
Nitrate as N	1.0	0.10	mg/L	1.00		102	90-110	4.58	20	
<b>Duplicate (B227319-DUP1)</b>				Source: 19D0030-04			Prepared & Analyzed: 04/02/19			
Nitrate as N	7.8	0.20	mg/L		7.8			0.213	20	
<b>Matrix Spike (B227319-MS1)</b>				Source: 19D0030-04			Prepared & Analyzed: 04/02/19			
Nitrate as N	9.2	0.20	mg/L	2.00	7.8	71.5	* 80-120			MS-07
<b>Batch B227332 - EPA 300.0</b>										
<b>Blank (B227332-BLK1)</b>				Prepared & Analyzed: 04/02/19						
Nitrite as N	ND	0.100	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
<b>Batch B227332 - EPA 300.0</b>										
<b>LCS (B227332-BS1)</b>				Prepared & Analyzed: 04/02/19						
Nitrite as N	1.10	0.100	mg/L	1.00		110	90-110			
<b>LCS Dup (B227332-BSD1)</b>				Prepared & Analyzed: 04/02/19						
Nitrite as N	1.10	0.100	mg/L	1.00		110	90-110	0.100	20	
<b>Duplicate (B227332-DUP1)</b>				Source: 19D0030-04		Prepared & Analyzed: 04/02/19				
Nitrite as N	0.792	0.100	mg/L		0.810			2.29	20	
<b>Matrix Spike (B227332-MS1)</b>				Source: 19D0030-04		Prepared & Analyzed: 04/02/19				
Nitrite as N	1.82	0.100	mg/L	1.00	0.810	101	80-120			
<b>Batch B227352 - EPA 300.0</b>										
<b>Blank (B227352-BLK1)</b>				Prepared & Analyzed: 04/05/19						
Chloride	ND	1.0	mg/L							
<b>LCS (B227352-BS1)</b>				Prepared & Analyzed: 04/05/19						
Chloride	5.1	1.0	mg/L	5.00		102	90-110			
<b>LCS Dup (B227352-BSD1)</b>				Prepared & Analyzed: 04/05/19						
Chloride	5.1	1.0	mg/L	5.00		103	90-110	0.224	20	
<b>Duplicate (B227352-DUP2)</b>				Source: 19D0030-04		Prepared & Analyzed: 04/05/19				
Chloride	140	10	mg/L		140			2.91	20	
<b>Matrix Spike (B227352-MS2)</b>				Source: 19D0030-04		Prepared & Analyzed: 04/05/19				
Chloride	180	10	mg/L	50.0	140	82.0	80-120			

**IDENTIFICATION SUMMARY  
FOR SINGLE COMPONENT ANALYTES**

LCS

*SW-846 8082A*

Lab Sample ID:           B227544-BS1                                Date(s) Analyzed:           04/06/2019                     04/06/2019          

Instrument ID (1):           ECD4                                                Instrument ID (2):           ECD4          

GC Column (1):                                      ID:                                      (mm)                      GC Column (2):                                      ID:                                      (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.42	
	2	0.000	0.000	0.000	0.42	2.4
Aroclor-1260	1	0.000	0.000	0.000	0.40	
	2	0.000	0.000	0.000	0.41	2.5

**IDENTIFICATION SUMMARY  
FOR SINGLE COMPONENT ANALYTES**

LCS Dup

*SW-846 8082A*

Lab Sample ID:                   B227544-BSD1                                        Date(s) Analyzed:           04/06/2019                     04/06/2019          

Instrument ID (1):                   ECD4                                        Instrument ID (2):                   ECD4                  

GC Column (1):                      ID:                      (mm)                      GC Column (2):                      ID:                      (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.41	
	2	0.000	0.000	0.000	0.42	2.4
Aroclor-1260	1	0.000	0.000	0.000	0.38	
	2	0.000	0.000	0.000	0.40	5.1

**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.
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.
MS-07	Matrix spike recovery is outside of control limits. Analysis is in control based on laboratory fortified blank recovery. Possibility of sample matrix effects that lead to low bias for reported result or non-homogeneous sample aliquot cannot be eliminated.
MS-19	Sample to spike ratio is greater than or equal to 4:1. Spiked amount is not representative of the native amount in the sample. Appropriate or meaningful recoveries cannot be calculated.
R-05	Laboratory fortified blank duplicate RPD is outside of control limits. Reduced precision is anticipated for any reported value for this compound.
RL-07	Elevated reporting limit based on lowest point in calibration. MA CAM reporting limit not met.
V-16	Response factor is less than method specified minimum acceptable value. Reduced precision and accuracy may be associated with reported result.
V-20	Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side.
V-34	Data validation is not affected since sample result was "not detected" for this compound. Initial calibration verification (ICV) did not meet method specifications and was biased on the low side for this compound. Reported result is estimated.
W-17	Samples analyzed for Ortho phosphate were not filtered within 15 minutes of sampling.

**CERTIFICATIONS**

**Certified Analyses included in this Report**

Analyte	Certifications
<b><i>EPA 300.0 in Water</i></b>	
Chloride	NC,NY,MA,VA,ME,NH,CT,RI
Nitrate as N	NC,NY,MA,VA,ME,NH,CT,RI
Nitrite as N	NY,NC,NH,VA,ME,CT,RI
<b><i>SM 21-22 4500 PE in Water</i></b>	
Orthophosphate as P	CT,MA,NH,NY,RI,ME,VA
Phosphorus, Total	CT,MA,NH,NY,RI,NC,ME,VA
<b><i>SM19-22 4500 NH3 C in Water</i></b>	
Ammonia as N	NY,MA,CT,RI,VA,NC,ME
<b><i>SM19-22 4500-N Org B,C-NH3 C in Water</i></b>	
Total Kjeldahl Nitrogen	CT,MA,NH,NY,RI,NC,ME,VA
<b><i>SW-846 6020B in Water</i></b>	
Antimony	CT,NH,NY,ME,VA,NC
Arsenic	CT,NH,NY,NC,ME,VA
Arsenic	CT,NH,NY,ME,VA,NC
Barium	CT,NH,NY,ME,VA,NC
Beryllium	CT,NH,NY,ME,VA,NC
Cadmium	CT,NH,NY,RI,ME,VA,NC
Chromium	CT,NH,NY,ME,VA,NC
Copper	CT,NH,NY,ME,VA,NC
Lead	CT,NH,NY,ME,VA,NC
Manganese	CT,NH,NY,ME,VA,NC
Nickel	CT,NH,NY,ME,VA,NC
Selenium	CT,NH,NY,ME,VA,NC
Silver	CT,NH,NY,ME,VA,NC
Thallium	CT,NH,NY,ME,VA,NC
Vanadium	CT,NH,NY,ME,VA,NC
Zinc	CT,NH,NY,ME,VA,NC
<b><i>SW-846 7470A in Water</i></b>	
Mercury	CT,NH,NY,NC,ME,VA
<b><i>SW-846 8082A in Water</i></b>	
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



## CERTIFICATIONS

## Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8082A in Water</i>	
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 Water</i>	
Acetone	CT,NH,NY,ME
tert-Amyl Methyl Ether (TAME)	NH,NY,ME
Benzene	CT,NH,NY,ME
Bromobenzene	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	NY,ME
sec-Butylbenzene	NY,ME
tert-Butylbenzene	NY,ME
tert-Butyl Ethyl Ether (TBEE)	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	NY,ME
4-Chlorotoluene	NY,ME
1,2-Dibromo-3-chloropropane (DBCP)	NY
1,2-Dibromoethane (EDB)	NY
Dibromomethane	NH,NY,ME
1,2-Dichlorobenzene	CT,NY,ME
1,3-Dichlorobenzene	CT,NH,NY,ME
1,4-Dichlorobenzene	CT,NH,NY,ME
Dichlorodifluoromethane (Freon 12)	NH,NY,ME
1,1-Dichloroethane	CT,NH,NY,ME
1,2-Dichloroethane	CT,NH,NY,ME
1,1-Dichloroethylene	CT,NH,NY,ME
cis-1,2-Dichloroethylene	NY,ME
trans-1,2-Dichloroethylene	CT,NH,NY,ME
1,2-Dichloropropane	CT,NH,NY,ME
1,3-Dichloropropane	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
Diisopropyl Ether (DIPE)	NH,NY,ME
Ethylbenzene	CT,NH,NY,ME

**CERTIFICATIONS**

**Certified Analyses included in this Report**

Analyte	Certifications
<b>SW-846 8260C in Water</b>	
Hexachlorobutadiene	CT,NH,NY,ME
2-Hexanone (MBK)	CT,NH,NY,ME
Isopropylbenzene (Cumene)	NY,ME
p-Isopropyltoluene (p-Cymene)	CT,NH,NY,ME
Methyl tert-Butyl Ether (MTBE)	CT,NH,NY,ME
Methylene Chloride	CT,NH,NY,ME
4-Methyl-2-pentanone (MIBK)	CT,NH,NY,ME
Naphthalene	NH,NY,ME
n-Propylbenzene	CT,NH,NY,ME
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	NH,NY,ME
1,2,4-Trichlorobenzene	CT,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	NY,ME
1,3,5-Trimethylbenzene	NY,ME
Vinyl Chloride	CT,NH,NY,ME
m+p Xylene	CT,NH,NY,ME
o-Xylene	CT,NH,NY,ME
<b>SW-846 8270D in Water</b>	
Acenaphthene	CT,NY,NH
Acenaphthylene	CT,NY,NH
Acetophenone	NY
Aniline	CT,NY
Anthracene	CT,NY,NH
Benzo(a)anthracene	CT,NY,NH
Benzo(a)pyrene	CT,NY,NH
Benzo(b)fluoranthene	CT,NY,NH
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

**CERTIFICATIONS**

**Certified Analyses included in this Report**

Analyte	Certifications
<i>SW-846 8270D in Water</i>	
Chrysene	CT,NY,NH
Dibenz(a,h)anthracene	CT,NY,NH
Dibenzofuran	CT,NY,NH
Di-n-butylphthalate	CT,NY,NH
1,2-Dichlorobenzene	CT,NY,NH
1,3-Dichlorobenzene	CT,NY,NH
1,4-Dichlorobenzene	CT,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/Azobenzene	NY
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
2,4,5-Trichlorophenol	CT,NY,NH
2,4,6-Trichlorophenol	CT,NY,NH

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

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2005	100033	03/1/2020
MA	Massachusetts DEP	M-MA100	06/30/2019
CT	Connecticut Department of Public Health	PH-0567	09/30/2019
NY	New York State Department of Health	10899 NELAP	04/1/2020
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2020
RI	Rhode Island Department of Health	LAO00112	12/30/2019
NC	North Carolina Div. of Water Quality	652	12/31/2019
NJ	New Jersey DEP	MA007 NELAP	06/30/2019
FL	Florida Department of Health	E871027 NELAP	06/30/2019
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2019
ME	State of Maine	2011028	06/9/2019
VA	Commonwealth of Virginia	460217	12/14/2019
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2019
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2019
NC-DW	North Carolina Department of Health	25703	07/31/2019

Phone: 413-525-2332

Fax: 413-525-6405

Email: info@contestlabs.com

CHAIN OF CUSTODY RECORD

JLH

Company Name: Vertex
Address: 100 N Washington St Boston MA
Phone: 781-917-5360
Project Name: River's Edge
Project Location: Wayland, MA
Project Number: 46047
Project Manager: K Sarson
Con-Test Quote Name/Number:
Invoice Recipient: K. Sarson
Sampled By: K. Sarson

Requested Turnaround Time
7-Day, 10-Day, Due Date: 5 Day
Rush Approval Required
1-Day, 3-Day, 2-Day, 4-Day
Data Delivery
Format: PDF, EXCEL
Other: EOD
CLP Like Data Pkg Required:
Email To: ksarson@vertexeng.com
Fax To #:

Table with columns for Analytical Parameters (Diss Arsenic, Total MCP 14 Metals, PCB 8082, Ammo/Total N/Phos, Nitrate/ortho/chloride) and rows for samples 1-4.

# of Containers
Preservation Code
Container Code
Dissolved Metals Samples
Field Filtered
Lab to Filter
Orthophosphate Samples
Field Filtered
Lab to Filter

1 Matrix Codes:
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)
2 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)

Main data table with columns: Con-Test Work Order#, Client Sample ID / Description, Beginning Date/Time, Ending Date/Time, Composite, Grab, Matrix Code, Conc Code.

Comments: sample 01 was moved to work order 19D0106 JLH 4/3/19, add Cu and Mn

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), Date/Time: 4/1/19 1545
Received by: (signature), Date/Time: 4/1/19 1545
Relinquished by: (signature), Date/Time: 4/1/19 1945
Received by: (signature), Date/Time: 4-1-19 1945

Detection Limit Requirements
Special Requirements
MA MCP Required
MCP Certification Form Required
CT RCP Required
RCP Certification Form Required
MA State DW Required
PWSID #
Project Entity
Government, Municipality, MWRA, WRTA
Federal, 21 J, School
City, Brownfield, MBTA

con-test ANALYTICAL LABORATORY logo
www.contestlabs.com
NELAP and AIHA-LAP, LLC Accredited
Other
Chromatogram
AIHA-LAP, LLC

3 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

I Have Not Confirmed Sample Container Numbers With Lab Staff Before Relinquishing Over Samples \_\_\_\_\_



**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 Vectex

Received By LR Date 4-1-19 Time 1945

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 # 3 Actual Temp - 3.3, 2.7  
 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 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? F Who was notified? \_\_\_\_\_  
 Are there Short Holds? T Who was notified? Irma

Is there enough Volume? \*T  
 Is there Headspace where applicable? F MS/MSD? F  
 Proper Media/Containers Used? T Is splitting samples required? F  
 Were trip blanks received? T On COC? F  
 Do all samples have the proper pH? Acid T Base \_\_\_\_\_

Vials	#	Containers:	#	#	#	#
Unp-		1 Liter Amb.	6	1 Liter Plastic	7	16 oz Amb.
HCL-	<u>13 14</u>	500 mL Amb.		500 mL Plastic		8oz Amb/Clear
Meoh-		250 mL Amb.		250 mL Plastic	6	4oz Amb/Clear
Bisulfate-		Flashpoint		Col./Bacteria		2oz Amb/Clear
DI-		Other Glass	6	Other Plastic		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:**

\* No unpreserved container received for sample V-163 (MW)  
 Trip blank received not on COC

## MADEP MCP Analytical Method Report Certification Form

Laboratory Name: Con-Test Analytical Laboratory	Project #: 19D0030
Project Location: Wayland, MA	RTN:

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]  
19D0030-02 thru 19D0030-05

Matrices: Water

**CAM Protocol (check all that below)**

8260 VOC CAM II A (X)	7470/7471 Hg CAM III B (X)	MassDEP VPH CAM IV A ( )	8082 PCB CAM V A (X)	9014 Total Cyanide/PAC CAM VI A ( )	6860 Perchlorate CAM VIII B ( )
8270 SVOC CAM II B (X)	7010 Metals CAM III C ( )	MassDEP VPH CAM IV C ( )	8081 Pesticides CAM V B ( )	7196 Hex Cr CAM VI B ( )	MassDEP APH CAM IX A ( )
6010 Metals CAM III A ( )	6020 Metals CAM III D (X)	MassDEP EPH CAM IV B ( )	8151 Herbicides CAM V C ( )	8330 Explosives CAM VIII A ( )	TO-15 VOC CAM IX B ( )

**Affirmative response to Questions A through F is required for "Presumptive Certainty" status**

<b>A</b>	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?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>B</b>	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>C</b>	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>D</b>	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?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>E a</b>	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).	<input type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>E b</b>	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	<input type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>F</b>	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)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>

**A response to questions G, H and I below is required for "Presumptive Certainty" status**

<b>G</b>	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <sup>1</sup>
----------	---	--

**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.**

<b>H</b>	Were all QC performance standards specified in the CAM protocol(s) achieved?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <sup>1</sup>
<b>I</b>	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>

<sup>1</sup>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: Lisa Worthington Position: Technical Representative  
Printed Name: Lisa A. Worthington Date: 04/08/19

April 23, 2019

Kristen Sarson  
Vertex Engineering - Boston  
100 North Washington St. Suite 302  
Boston, MA 02114

Project Location: Wayland, MA  
Client Job Number:  
Project Number: 46047  
Laboratory Work Order Number: 19D0106

Enclosed are results of analyses for samples received by the laboratory on April 2, 2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, reading "Jessica Hoffman", is displayed on a light blue rectangular background. The signature is written in a cursive, flowing style.

Jessica L. Hoffman  
Project Manager



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

Vertex Engineering - Boston  
 100 North Washington St. Suite 302  
 Boston, MA 02114  
 ATTN: Kristen Sarson

REPORT DATE: 4/23/2019

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 46047

**ANALYTICAL SUMMARY**

WORK ORDER NUMBER: 19D0106

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

PROJECT LOCATION: Wayland, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
V-103 (MW)	19D0106-01	Ground Water		EPA 300.0 SM 21-22 4500 P E SM19-22 4500 NH3 C SM19-22 4500-N Org B,C-NH3 C SW-846 6020B SW-846 7470A SW-846 8082A SW-846 8260C SW-846 8270D	
V-106 (MW)	19D0106-02	Ground Water		EPA 300.0 SM 21-22 4500 P E SM19-22 4500 NH3 C SM19-22 4500-N Org B,C-NH3 C SW-846 6020B SW-846 7470A SW-846 8082A SW-846 8260C SW-846 8270D	
V-104 (MW)	19D0106-03	Ground Water		EPA 300.0 SM 21-22 4500 P E SM19-22 4500 NH3 C SM19-22 4500-N Org B,C-NH3 C SW-846 6020B SW-846 7470A SW-846 8082A SW-846 8260C SW-846 8270D	
MW-3	19D0106-04	Ground Water		EPA 300.0 SM 21-22 4500 P E SM19-22 4500 NH3 C SM19-22 4500-N Org B,C-NH3 C SW-846 6020B SW-846 7470A SW-846 8082A SW-846 8260C SW-846 8270D	

**CASE NARRATIVE SUMMARY**

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

REVISED REPORT 04-23-19: Per client request dissolved Ni was added to sample 19D0106-02.

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**EPA 300.0****Qualifications:****MS-07**

Matrix spike recovery is outside of control limits. Analysis is in control based on laboratory fortified blank recovery. Possibility of sample matrix effects that lead to low bias for reported result or non-homogeneous sample aliquot cannot be eliminated.

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

19D0106-03[V-104 (MW)], B227612-MS1

**SM 21-22 4500 P E****Qualifications:****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:****Orthophosphate as P**

B227283-BSD1

**W-17**

Samples analyzed for Ortho phosphate were not filtered within 15 minutes of sampling.

**Analyte & Samples(s) Qualified:****Orthophosphate as P**

19D0106-01[V-103 (MW)], 19D0106-02[V-106 (MW)], 19D0106-03[V-104 (MW)], 19D0106-04[MW-3], B227283-DUP1, B227283-DUP2, B227283-MS1, B227283-MS2

**SW-846 8260C****Qualifications:****L-02**

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

**Analyte & Samples(s) Qualified:****Diethyl Ether**

B227208-BS1, B227208-BSD1

**Vinyl Chloride**

B227208-BS1, B227208-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:****1,1,1,2-Tetrachloroethane**

19D0106-02[V-106 (MW)], 19D0106-03[V-104 (MW)], 19D0106-04[MW-3], B227208-BLK1, B227208-BS1, B227208-BSD1, S034384-CCV1

**Acetone**

19D0106-01[V-103 (MW)], 19D0106-02[V-106 (MW)], 19D0106-03[V-104 (MW)], 19D0106-04[MW-3], B227205-BLK1, B227205-BS1, B227205-BSD1, B227208-BLK1, B227208-BS1, B227208-BSD1, S034302-CCV1, S034384-CCV1

**RL-07**

Elevated reporting limit based on lowest point in calibration.

MA CAM reporting limit not met.

**Analyte & Samples(s) Qualified:****1,2,3-Trichlorobenzene**

19D0106-01[V-103 (MW)], 19D0106-02[V-106 (MW)], 19D0106-03[V-104 (MW)], 19D0106-04[MW-3]

**1,2,4-Trichlorobenzene**

19D0106-01[V-103 (MW)], 19D0106-02[V-106 (MW)], 19D0106-03[V-104 (MW)], 19D0106-04[MW-3]

**1,2-Dibromo-3-chloropropane (DBP)**

19D0106-01[V-103 (MW)], 19D0106-02[V-106 (MW)], 19D0106-03[V-104 (MW)], 19D0106-04[MW-3]

**Carbon Disulfide**

19D0106-01[V-103 (MW)], 19D0106-02[V-106 (MW)], 19D0106-03[V-104 (MW)], 19D0106-04[MW-3]

**Methylene Chloride**

19D0106-01[V-103 (MW)], 19D0106-02[V-106 (MW)], 19D0106-03[V-104 (MW)], 19D0106-04[MW-3]

**Naphthalene**

19D0106-01[V-103 (MW)], 19D0106-02[V-106 (MW)], 19D0106-03[V-104 (MW)], 19D0106-04[MW-3]

**V-05**

Continuing calibration verification (CCV) did not meet method specifications and was biased on the low side for this compound.

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

19D0106-02[V-106 (MW)], 19D0106-03[V-104 (MW)], 19D0106-04[MW-3], B227208-BLK1, B227208-BS1, B227208-BSD1, S034384-CCV1

**2-Butanone (MEK)**

19D0106-02[V-106 (MW)], 19D0106-03[V-104 (MW)], 19D0106-04[MW-3], B227208-BLK1, B227208-BS1, B227208-BSD1, S034384-CCV1

**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**

19D0106-01[V-103 (MW)], 19D0106-02[V-106 (MW)], 19D0106-03[V-104 (MW)], 19D0106-04[MW-3], B227205-BLK1, B227205-BS1, B227205-BSD1, B227208-BLK1, B227208-BS1, B227208-BSD1, S034302-CCV1, S034384-CCV1

**V-20**

Continuing calibration verification (CCV) 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:****Diethyl Ether**

B227208-BS1, B227208-BSD1, S034384-CCV1

**Styrene**

B227205-BS1, B227205-BSD1, B227208-BS1, B227208-BSD1, S034302-CCV1, S034384-CCV1

**Vinyl Chloride**

B227208-BS1, B227208-BSD1, S034384-CCV1

**SW-846 8270D****Qualifications:****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:****4-Chloroaniline**

19D0106-04[MW-3], B227443-BLK1, B227443-BS1, B227443-BSD1

**Phenol**

19D0106-04[MW-3], B227443-BLK1, B227443-BS1, B227443-BSD1

**V-05**

Continuing calibration verification (CCV) did not meet method specifications and was biased on the low side for this compound.

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

19D0106-01[V-103 (MW)], 19D0106-02[V-106 (MW)], 19D0106-03[V-104 (MW)], B227443-BLK1, B227443-BS1, B227443-BSD1, S034390-CCV1

**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:****4-Chloroaniline**

19D0106-01[V-103 (MW)], 19D0106-02[V-106 (MW)], 19D0106-03[V-104 (MW)], 19D0106-04[MW-3], B227443-BLK1, B227443-BS1, B227443-BSD1, S034390-CCV1, S034392-CCV1

**Aniline**

19D0106-01[V-103 (MW)], 19D0106-02[V-106 (MW)], 19D0106-03[V-104 (MW)], 19D0106-04[MW-3], B227443-BLK1, B227443-BS1, B227443-BSD1, S034390-CCV1, S034392-CCV1

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**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  
Technical Representative

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19D0106

Date Received: 4/2/2019

Field Sample #: V-103 (MW)

Sampled: 4/2/2019 07:30

Sample ID: 19D0106-01

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	10	µg/L	1	R-05	SW-846 8260C	4/3/19	4/3/19 15:39	EEH
tert-Amyl Methyl Ether (TAME)	ND	2.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 15:39	EEH
Benzene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 15:39	EEH
Bromobenzene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 15:39	EEH
Bromochloromethane	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 15:39	EEH
Bromodichloromethane	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 15:39	EEH
Bromoform	ND	2.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 15:39	EEH
Bromomethane	ND	2.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 15:39	EEH
2-Butanone (MEK)	ND	10	µg/L	1		SW-846 8260C	4/3/19	4/3/19 15:39	EEH
n-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 15:39	EEH
sec-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 15:39	EEH
tert-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 15:39	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	µg/L	1		SW-846 8260C	4/3/19	4/3/19 15:39	EEH
Carbon Disulfide	ND	5.0	µg/L	1	RL-07	SW-846 8260C	4/3/19	4/3/19 15:39	EEH
Carbon Tetrachloride	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 15:39	EEH
Chlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 15:39	EEH
Chlorodibromomethane	ND	0.50	µg/L	1		SW-846 8260C	4/3/19	4/3/19 15:39	EEH
Chloroethane	ND	2.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 15:39	EEH
Chloroform	ND	2.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 15:39	EEH
Chloromethane	ND	2.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 15:39	EEH
2-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 15:39	EEH
4-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 15:39	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	µg/L	1	RL-07	SW-846 8260C	4/3/19	4/3/19 15:39	EEH
1,2-Dibromoethane (EDB)	ND	0.50	µg/L	1		SW-846 8260C	4/3/19	4/3/19 15:39	EEH
Dibromomethane	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 15:39	EEH
1,2-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 15:39	EEH
1,3-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 15:39	EEH
1,4-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 15:39	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 15:39	EEH
1,1-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 15:39	EEH
1,2-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 15:39	EEH
1,1-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 15:39	EEH
cis-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 15:39	EEH
trans-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 15:39	EEH
1,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 15:39	EEH
1,3-Dichloropropane	ND	0.50	µg/L	1		SW-846 8260C	4/3/19	4/3/19 15:39	EEH
2,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 15:39	EEH
1,1-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260C	4/3/19	4/3/19 15:39	EEH
cis-1,3-Dichloropropene	ND	0.40	µg/L	1		SW-846 8260C	4/3/19	4/3/19 15:39	EEH
trans-1,3-Dichloropropene	ND	0.40	µg/L	1		SW-846 8260C	4/3/19	4/3/19 15:39	EEH
Diethyl Ether	ND	2.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 15:39	EEH
Diisopropyl Ether (DIPE)	ND	0.50	µg/L	1		SW-846 8260C	4/3/19	4/3/19 15:39	EEH
1,4-Dioxane	ND	50	µg/L	1	V-16	SW-846 8260C	4/3/19	4/3/19 15:39	EEH
Ethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 15:39	EEH



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Project Location: Wayland, MA

Sample Description:

Work Order: 19D0106

Date Received: 4/2/2019

Field Sample #: V-103 (MW)

Sampled: 4/2/2019 07:30

Sample ID: 19D0106-01

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.60	µg/L	1		SW-846 8260C	4/3/19	4/3/19 15:39	EEH
2-Hexanone (MBK)	ND	10	µg/L	1		SW-846 8260C	4/3/19	4/3/19 15:39	EEH
Isopropylbenzene (Cumene)	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 15:39	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 15:39	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 15:39	EEH
Methylene Chloride	ND	5.0	µg/L	1	RL-07	SW-846 8260C	4/3/19	4/3/19 15:39	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	µg/L	1		SW-846 8260C	4/3/19	4/3/19 15:39	EEH
Naphthalene	ND	5.0	µg/L	1	RL-07	SW-846 8260C	4/3/19	4/3/19 15:39	EEH
n-Propylbenzene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 15:39	EEH
Styrene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 15:39	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 15:39	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1		SW-846 8260C	4/3/19	4/3/19 15:39	EEH
Tetrachloroethylene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 15:39	EEH
Tetrahydrofuran	ND	2.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 15:39	EEH
Toluene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 15:39	EEH
1,2,3-Trichlorobenzene	ND	5.0	µg/L	1	RL-07	SW-846 8260C	4/3/19	4/3/19 15:39	EEH
1,2,4-Trichlorobenzene	ND	5.0	µg/L	1	RL-07	SW-846 8260C	4/3/19	4/3/19 15:39	EEH
1,1,1-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 15:39	EEH
1,1,2-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 15:39	EEH
Trichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 15:39	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 15:39	EEH
1,2,3-Trichloropropane	ND	2.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 15:39	EEH
1,2,4-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 15:39	EEH
1,3,5-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 15:39	EEH
Vinyl Chloride	ND	2.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 15:39	EEH
m+p Xylene	ND	2.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 15:39	EEH
o-Xylene	ND	1.0	µg/L	1		SW-846 8260C	4/3/19	4/3/19 15:39	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	85.8	70-130	4/3/19 15:39
Toluene-d8	99.0	70-130	4/3/19 15:39
4-Bromofluorobenzene	98.7	70-130	4/3/19 15:39

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Project Location: Wayland, MA

Sample Description:

Work Order: 19D0106

Date Received: 4/2/2019

Field Sample #: V-103 (MW)

Sampled: 4/2/2019 07:30

Sample ID: 19D0106-01

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	4.9	µg/L	1		SW-846 8270D	4/4/19	4/5/19 17:43	BGL
Acenaphthylene	ND	4.9	µg/L	1		SW-846 8270D	4/4/19	4/5/19 17:43	BGL
Acetophenone	ND	9.8	µg/L	1		SW-846 8270D	4/4/19	4/5/19 17:43	BGL
Aniline	ND	4.9	µg/L	1	V-34	SW-846 8270D	4/4/19	4/5/19 17:43	BGL
Anthracene	ND	4.9	µg/L	1		SW-846 8270D	4/4/19	4/5/19 17:43	BGL
Benzo(a)anthracene	ND	4.9	µg/L	1		SW-846 8270D	4/4/19	4/5/19 17:43	BGL
Benzo(a)pyrene	ND	4.9	µg/L	1		SW-846 8270D	4/4/19	4/5/19 17:43	BGL
Benzo(b)fluoranthene	ND	4.9	µg/L	1		SW-846 8270D	4/4/19	4/5/19 17:43	BGL
Benzo(g,h,i)perylene	ND	4.9	µg/L	1		SW-846 8270D	4/4/19	4/5/19 17:43	BGL
Benzo(k)fluoranthene	ND	4.9	µg/L	1		SW-846 8270D	4/4/19	4/5/19 17:43	BGL
Bis(2-chloroethoxy)methane	ND	9.8	µg/L	1		SW-846 8270D	4/4/19	4/5/19 17:43	BGL
Bis(2-chloroethyl)ether	ND	9.8	µg/L	1		SW-846 8270D	4/4/19	4/5/19 17:43	BGL
Bis(2-chloroisopropyl)ether	ND	9.8	µg/L	1		SW-846 8270D	4/4/19	4/5/19 17:43	BGL
Bis(2-Ethylhexyl)phthalate	ND	9.8	µg/L	1		SW-846 8270D	4/4/19	4/5/19 17:43	BGL
4-Bromophenylphenylether	ND	9.8	µg/L	1		SW-846 8270D	4/4/19	4/5/19 17:43	BGL
Butylbenzylphthalate	ND	9.8	µg/L	1		SW-846 8270D	4/4/19	4/5/19 17:43	BGL
4-Chloroaniline	ND	9.8	µg/L	1	V-34	SW-846 8270D	4/4/19	4/5/19 17:43	BGL
2-Chloronaphthalene	ND	9.8	µg/L	1		SW-846 8270D	4/4/19	4/5/19 17:43	BGL
2-Chlorophenol	ND	9.8	µg/L	1		SW-846 8270D	4/4/19	4/5/19 17:43	BGL
Chrysene	ND	4.9	µg/L	1		SW-846 8270D	4/4/19	4/5/19 17:43	BGL
Dibenz(a,h)anthracene	ND	4.9	µg/L	1		SW-846 8270D	4/4/19	4/5/19 17:43	BGL
Dibenzofuran	ND	4.9	µg/L	1		SW-846 8270D	4/4/19	4/5/19 17:43	BGL
Di-n-butylphthalate	ND	9.8	µg/L	1		SW-846 8270D	4/4/19	4/5/19 17:43	BGL
1,2-Dichlorobenzene	ND	4.9	µg/L	1		SW-846 8270D	4/4/19	4/5/19 17:43	BGL
1,3-Dichlorobenzene	ND	4.9	µg/L	1		SW-846 8270D	4/4/19	4/5/19 17:43	BGL
1,4-Dichlorobenzene	ND	4.9	µg/L	1		SW-846 8270D	4/4/19	4/5/19 17:43	BGL
3,3-Dichlorobenzidine	ND	9.8	µg/L	1		SW-846 8270D	4/4/19	4/5/19 17:43	BGL
2,4-Dichlorophenol	ND	9.8	µg/L	1		SW-846 8270D	4/4/19	4/5/19 17:43	BGL
Diethylphthalate	ND	9.8	µg/L	1		SW-846 8270D	4/4/19	4/5/19 17:43	BGL
2,4-Dimethylphenol	ND	9.8	µg/L	1		SW-846 8270D	4/4/19	4/5/19 17:43	BGL
Dimethylphthalate	ND	9.8	µg/L	1		SW-846 8270D	4/4/19	4/5/19 17:43	BGL
2,4-Dinitrophenol	ND	9.8	µg/L	1	V-05	SW-846 8270D	4/4/19	4/5/19 17:43	BGL
2,4-Dinitrotoluene	ND	9.8	µg/L	1		SW-846 8270D	4/4/19	4/5/19 17:43	BGL
2,6-Dinitrotoluene	ND	9.8	µg/L	1		SW-846 8270D	4/4/19	4/5/19 17:43	BGL
Di-n-octylphthalate	ND	9.8	µg/L	1		SW-846 8270D	4/4/19	4/5/19 17:43	BGL
1,2-Diphenylhydrazine/Azobenzene	ND	9.8	µg/L	1		SW-846 8270D	4/4/19	4/5/19 17:43	BGL
Fluoranthene	ND	4.9	µg/L	1		SW-846 8270D	4/4/19	4/5/19 17:43	BGL
Fluorene	ND	4.9	µg/L	1		SW-846 8270D	4/4/19	4/5/19 17:43	BGL
Hexachlorobenzene	ND	9.8	µg/L	1		SW-846 8270D	4/4/19	4/5/19 17:43	BGL
Hexachlorobutadiene	ND	9.8	µg/L	1		SW-846 8270D	4/4/19	4/5/19 17:43	BGL
Hexachloroethane	ND	9.8	µg/L	1		SW-846 8270D	4/4/19	4/5/19 17:43	BGL
Indeno(1,2,3-cd)pyrene	ND	4.9	µg/L	1		SW-846 8270D	4/4/19	4/5/19 17:43	BGL
Isophorone	ND	9.8	µg/L	1		SW-846 8270D	4/4/19	4/5/19 17:43	BGL
2-Methylnaphthalene	ND	4.9	µg/L	1		SW-846 8270D	4/4/19	4/5/19 17:43	BGL

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19D0106

Date Received: 4/2/2019

Field Sample #: V-103 (MW)

Sampled: 4/2/2019 07:30

Sample ID: 19D0106-01

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-Methylphenol	ND	9.8	µg/L	1		SW-846 8270D	4/4/19	4/5/19 17:43	BGL
3/4-Methylphenol	ND	9.8	µg/L	1		SW-846 8270D	4/4/19	4/5/19 17:43	BGL
Naphthalene	ND	4.9	µg/L	1		SW-846 8270D	4/4/19	4/5/19 17:43	BGL
Nitrobenzene	ND	9.8	µg/L	1		SW-846 8270D	4/4/19	4/5/19 17:43	BGL
2-Nitrophenol	ND	9.8	µg/L	1		SW-846 8270D	4/4/19	4/5/19 17:43	BGL
4-Nitrophenol	ND	9.8	µg/L	1		SW-846 8270D	4/4/19	4/5/19 17:43	BGL
Pentachlorophenol	ND	9.8	µg/L	1		SW-846 8270D	4/4/19	4/5/19 17:43	BGL
Phenanthrene	ND	4.9	µg/L	1		SW-846 8270D	4/4/19	4/5/19 17:43	BGL
Phenol	ND	9.8	µg/L	1		SW-846 8270D	4/4/19	4/5/19 17:43	BGL
Pyrene	ND	4.9	µg/L	1		SW-846 8270D	4/4/19	4/5/19 17:43	BGL
1,2,4-Trichlorobenzene	ND	4.9	µg/L	1		SW-846 8270D	4/4/19	4/5/19 17:43	BGL
2,4,5-Trichlorophenol	ND	9.8	µg/L	1		SW-846 8270D	4/4/19	4/5/19 17:43	BGL
2,4,6-Trichlorophenol	ND	9.8	µg/L	1		SW-846 8270D	4/4/19	4/5/19 17:43	BGL

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	47.1	15-110	
Phenol-d6	33.7	15-110	
Nitrobenzene-d5	70.7	30-130	
2-Fluorobiphenyl	73.4	30-130	
2,4,6-Tribromophenol	71.9	15-110	
p-Terphenyl-d14	86.7	30-130	

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19D0106

Date Received: 4/2/2019

Field Sample #: V-103 (MW)

Sampled: 4/2/2019 07:30

Sample ID: 19D0106-01

Sample Matrix: Ground Water

**Polychlorinated Biphenyls By GC/ECD**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.17	µg/L	1		SW-846 8082A	4/5/19	4/8/19 10:25	AYH
Aroclor-1221 [1]	ND	0.17	µg/L	1		SW-846 8082A	4/5/19	4/8/19 10:25	AYH
Aroclor-1232 [1]	ND	0.17	µg/L	1		SW-846 8082A	4/5/19	4/8/19 10:25	AYH
Aroclor-1242 [1]	ND	0.17	µg/L	1		SW-846 8082A	4/5/19	4/8/19 10:25	AYH
Aroclor-1248 [1]	ND	0.17	µg/L	1		SW-846 8082A	4/5/19	4/8/19 10:25	AYH
Aroclor-1254 [1]	ND	0.17	µg/L	1		SW-846 8082A	4/5/19	4/8/19 10:25	AYH
Aroclor-1260 [1]	ND	0.17	µg/L	1		SW-846 8082A	4/5/19	4/8/19 10:25	AYH
Aroclor-1262 [1]	ND	0.17	µg/L	1		SW-846 8082A	4/5/19	4/8/19 10:25	AYH
Aroclor-1268 [1]	ND	0.17	µg/L	1		SW-846 8082A	4/5/19	4/8/19 10:25	AYH
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		81.1	30-150					4/8/19 10:25	
Decachlorobiphenyl [2]		73.6	30-150					4/8/19 10:25	
Tetrachloro-m-xylene [1]		75.6	30-150					4/8/19 10:25	
Tetrachloro-m-xylene [2]		73.6	30-150					4/8/19 10:25	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19D0106

Date Received: 4/2/2019

Field Sample #: V-103 (MW)

Sampled: 4/2/2019 07:30

Sample ID: 19D0106-01

Sample Matrix: Ground Water

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.0	µg/L	1		SW-846 6020B	4/5/19	4/8/19 14:12	QNW
Arsenic	ND	0.40	µg/L	1		SW-846 6020B	4/5/19	4/8/19 14:12	QNW
Barium	14	10	µg/L	1		SW-846 6020B	4/5/19	4/8/19 14:12	QNW
Beryllium	ND	0.40	µg/L	1		SW-846 6020B	4/5/19	4/8/19 14:12	QNW
Cadmium	ND	0.50	µg/L	1		SW-846 6020B	4/5/19	4/8/19 14:12	QNW
Chromium	ND	1.0	µg/L	1		SW-846 6020B	4/5/19	4/8/19 14:12	QNW
Copper	ND	5.0	µg/L	1		SW-846 6020B	4/5/19	4/8/19 14:12	QNW
Lead	ND	1.0	µg/L	1		SW-846 6020B	4/5/19	4/8/19 14:12	QNW
Manganese	91	1.0	µg/L	1		SW-846 6020B	4/5/19	4/8/19 14:12	QNW
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	4/8/19	4/8/19 14:33	EJB
Nickel	ND	5.0	µg/L	1		SW-846 6020B	4/5/19	4/8/19 14:12	QNW
Selenium	ND	5.0	µg/L	1		SW-846 6020B	4/5/19	4/8/19 14:12	QNW
Silver	ND	0.50	µg/L	1		SW-846 6020B	4/5/19	4/8/19 14:12	QNW
Thallium	ND	0.20	µg/L	1		SW-846 6020B	4/5/19	4/8/19 14:12	QNW
Vanadium	ND	5.0	µg/L	1		SW-846 6020B	4/5/19	4/8/19 14:12	QNW
Zinc	ND	10	µg/L	1		SW-846 6020B	4/5/19	4/8/19 14:12	QNW

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Project Location: Wayland, MA

Sample Description:

Work Order: 19D0106

Date Received: 4/2/2019

Field Sample #: V-103 (MW)

Sampled: 4/2/2019 07:30

Sample ID: 19D0106-01

Sample Matrix: Ground Water

**Metals Analyses (Dissolved)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	0.74	0.40	µg/L	1		SW-846 6020B	4/5/19	4/8/19 11:17	QNW

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Project Location: Wayland, MA

Sample Description:

Work Order: 19D0106

Date Received: 4/2/2019

Field Sample #: V-103 (MW)

Sampled: 4/2/2019 07:30

Sample ID: 19D0106-01

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	ND	0.30	mg/L	1		SM19-22 4500 NH3 C	4/2/19	4/3/19 10:00	EC
Chloride	230	10	mg/L	10		EPA 300.0	4/9/19	4/9/19 5:48	MMH
Nitrate as N	1.7	0.10	mg/L	1		EPA 300.0	4/3/19	4/3/19 15:48	IS
Nitrite as N	ND	0.100	mg/L	1		EPA 300.0	4/3/19	4/3/19 15:48	IS
Orthophosphate as P	ND	0.050	mg/L	1	W-17	SM 21-22 4500 P E	4/2/19	4/2/19 18:30	IS
Phosphorus, Total	0.14	0.062	mg/L	1.25		SM 21-22 4500 P E	4/7/19	4/7/19 15:06	AIA
Total Kjeldahl Nitrogen	ND	1.0	mg/L	1		SM19-22 4500-N Org B,C-NH3 C	4/3/19	4/4/19 9:45	EC
Total Nitrogen	1.7	0.050	mg/L	1		SM19-22 4500-N Org B,C-NH3 C	4/9/19	4/9/19 7:21	LL

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Project Location: Wayland, MA

Sample Description:

Work Order: 19D0106

Date Received: 4/2/2019

Field Sample #: V-106 (MW)

Sampled: 4/2/2019 09:30

Sample ID: 19D0106-02

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	10	µg/L	1	R-05	SW-846 8260C	4/4/19	4/5/19 6:32	EEH
tert-Amyl Methyl Ether (TAME)	6.4	2.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:32	EEH
Benzene	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:32	EEH
Bromobenzene	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:32	EEH
Bromochloromethane	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:32	EEH
Bromodichloromethane	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:32	EEH
Bromoform	ND	2.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:32	EEH
Bromomethane	ND	2.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:32	EEH
2-Butanone (MEK)	ND	10	µg/L	1	V-05	SW-846 8260C	4/4/19	4/5/19 6:32	EEH
n-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:32	EEH
sec-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:32	EEH
tert-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:32	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:32	EEH
Carbon Disulfide	ND	5.0	µg/L	1	RL-07	SW-846 8260C	4/4/19	4/5/19 6:32	EEH
Carbon Tetrachloride	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:32	EEH
Chlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:32	EEH
Chlorodibromomethane	ND	0.50	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:32	EEH
Chloroethane	ND	2.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:32	EEH
Chloroform	ND	2.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:32	EEH
Chloromethane	ND	2.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:32	EEH
2-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:32	EEH
4-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:32	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	µg/L	1	RL-07	SW-846 8260C	4/4/19	4/5/19 6:32	EEH
1,2-Dibromoethane (EDB)	ND	0.50	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:32	EEH
Dibromomethane	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:32	EEH
1,2-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:32	EEH
1,3-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:32	EEH
1,4-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:32	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:32	EEH
1,1-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:32	EEH
1,2-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:32	EEH
1,1-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:32	EEH
cis-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:32	EEH
trans-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:32	EEH
1,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:32	EEH
1,3-Dichloropropane	ND	0.50	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:32	EEH
2,2-Dichloropropane	ND	1.0	µg/L	1	V-05	SW-846 8260C	4/4/19	4/5/19 6:32	EEH
1,1-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:32	EEH
cis-1,3-Dichloropropene	ND	0.40	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:32	EEH
trans-1,3-Dichloropropene	ND	0.40	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:32	EEH
Diethyl Ether	ND	2.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:32	EEH
Diisopropyl Ether (DIPE)	ND	0.50	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:32	EEH
1,4-Dioxane	ND	50	µg/L	1	V-16	SW-846 8260C	4/4/19	4/5/19 6:32	EEH
Ethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:32	EEH



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Project Location: Wayland, MA

Sample Description:

Work Order: 19D0106

Date Received: 4/2/2019

Field Sample #: V-106 (MW)

Sampled: 4/2/2019 09:30

Sample ID: 19D0106-02

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.60	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:32	EEH
2-Hexanone (MBK)	ND	10	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:32	EEH
Isopropylbenzene (Cumene)	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:32	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:32	EEH
Methyl tert-Butyl Ether (MTBE)	14	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:32	EEH
Methylene Chloride	ND	5.0	µg/L	1	RL-07	SW-846 8260C	4/4/19	4/5/19 6:32	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:32	EEH
Naphthalene	ND	5.0	µg/L	1	RL-07	SW-846 8260C	4/4/19	4/5/19 6:32	EEH
n-Propylbenzene	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:32	EEH
Styrene	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:32	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:32	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1	R-05	SW-846 8260C	4/4/19	4/5/19 6:32	EEH
Tetrachloroethylene	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:32	EEH
Tetrahydrofuran	ND	2.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:32	EEH
Toluene	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:32	EEH
1,2,3-Trichlorobenzene	ND	5.0	µg/L	1	RL-07	SW-846 8260C	4/4/19	4/5/19 6:32	EEH
1,2,4-Trichlorobenzene	ND	5.0	µg/L	1	RL-07	SW-846 8260C	4/4/19	4/5/19 6:32	EEH
1,1,1-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:32	EEH
1,1,2-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:32	EEH
Trichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:32	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:32	EEH
1,2,3-Trichloropropane	ND	2.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:32	EEH
1,2,4-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:32	EEH
1,3,5-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:32	EEH
Vinyl Chloride	ND	2.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:32	EEH
m+p Xylene	ND	2.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:32	EEH
o-Xylene	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:32	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	92.0	70-130	4/5/19 6:32
Toluene-d8	98.3	70-130	4/5/19 6:32
4-Bromofluorobenzene	100	70-130	4/5/19 6:32

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Project Location: Wayland, MA

Sample Description:

Work Order: 19D0106

Date Received: 4/2/2019

Field Sample #: V-106 (MW)

Sampled: 4/2/2019 09:30

Sample ID: 19D0106-02

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	6.1	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:09	BGL
Acenaphthylene	ND	6.1	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:09	BGL
Acetophenone	ND	12	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:09	BGL
Aniline	ND	6.1	µg/L	1	V-34	SW-846 8270D	4/4/19	4/5/19 18:09	BGL
Anthracene	ND	6.1	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:09	BGL
Benzo(a)anthracene	ND	6.1	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:09	BGL
Benzo(a)pyrene	ND	6.1	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:09	BGL
Benzo(b)fluoranthene	ND	6.1	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:09	BGL
Benzo(g,h,i)perylene	ND	6.1	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:09	BGL
Benzo(k)fluoranthene	ND	6.1	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:09	BGL
Bis(2-chloroethoxy)methane	ND	12	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:09	BGL
Bis(2-chloroethyl)ether	ND	12	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:09	BGL
Bis(2-chloroisopropyl)ether	ND	12	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:09	BGL
Bis(2-Ethylhexyl)phthalate	ND	12	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:09	BGL
4-Bromophenylphenylether	ND	12	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:09	BGL
Butylbenzylphthalate	ND	12	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:09	BGL
4-Chloroaniline	ND	12	µg/L	1	V-34	SW-846 8270D	4/4/19	4/5/19 18:09	BGL
2-Chloronaphthalene	ND	12	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:09	BGL
2-Chlorophenol	ND	12	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:09	BGL
Chrysene	ND	6.1	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:09	BGL
Dibenz(a,h)anthracene	ND	6.1	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:09	BGL
Dibenzofuran	ND	6.1	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:09	BGL
Di-n-butylphthalate	ND	12	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:09	BGL
1,2-Dichlorobenzene	ND	6.1	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:09	BGL
1,3-Dichlorobenzene	ND	6.1	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:09	BGL
1,4-Dichlorobenzene	ND	6.1	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:09	BGL
3,3-Dichlorobenzidine	ND	12	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:09	BGL
2,4-Dichlorophenol	ND	12	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:09	BGL
Diethylphthalate	ND	12	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:09	BGL
2,4-Dimethylphenol	ND	12	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:09	BGL
Dimethylphthalate	ND	12	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:09	BGL
2,4-Dinitrophenol	ND	12	µg/L	1	V-05	SW-846 8270D	4/4/19	4/5/19 18:09	BGL
2,4-Dinitrotoluene	ND	12	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:09	BGL
2,6-Dinitrotoluene	ND	12	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:09	BGL
Di-n-octylphthalate	ND	12	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:09	BGL
1,2-Diphenylhydrazine/Azobenzene	ND	12	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:09	BGL
Fluoranthene	ND	6.1	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:09	BGL
Fluorene	ND	6.1	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:09	BGL
Hexachlorobenzene	ND	12	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:09	BGL
Hexachlorobutadiene	ND	12	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:09	BGL
Hexachloroethane	ND	12	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:09	BGL
Indeno(1,2,3-cd)pyrene	ND	6.1	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:09	BGL
Isophorone	ND	12	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:09	BGL
2-Methylnaphthalene	ND	6.1	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:09	BGL

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19D0106

Date Received: 4/2/2019

Field Sample #: V-106 (MW)

Sampled: 4/2/2019 09:30

Sample ID: 19D0106-02

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-Methylphenol	ND	12	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:09	BGL
3/4-Methylphenol	ND	12	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:09	BGL
Naphthalene	ND	6.1	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:09	BGL
Nitrobenzene	ND	12	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:09	BGL
2-Nitrophenol	ND	12	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:09	BGL
4-Nitrophenol	ND	12	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:09	BGL
Pentachlorophenol	ND	12	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:09	BGL
Phenanthrene	ND	6.1	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:09	BGL
Phenol	ND	12	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:09	BGL
Pyrene	ND	6.1	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:09	BGL
1,2,4-Trichlorobenzene	ND	6.1	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:09	BGL
2,4,5-Trichlorophenol	ND	12	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:09	BGL
2,4,6-Trichlorophenol	ND	12	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:09	BGL
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2-Fluorophenol		51.5	15-110					4/5/19 18:09	
Phenol-d6		39.8	15-110					4/5/19 18:09	
Nitrobenzene-d5		73.1	30-130					4/5/19 18:09	
2-Fluorobiphenyl		77.0	30-130					4/5/19 18:09	
2,4,6-Tribromophenol		76.2	15-110					4/5/19 18:09	
p-Terphenyl-d14		89.7	30-130					4/5/19 18:09	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19D0106

Date Received: 4/2/2019

Field Sample #: V-106 (MW)

Sampled: 4/2/2019 09:30

Sample ID: 19D0106-02

Sample Matrix: Ground Water

**Polychlorinated Biphenyls By GC/ECD**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.12	µg/L	1		SW-846 8082A	4/5/19	4/8/19 10:38	AYH
Aroclor-1221 [1]	ND	0.12	µg/L	1		SW-846 8082A	4/5/19	4/8/19 10:38	AYH
Aroclor-1232 [1]	ND	0.12	µg/L	1		SW-846 8082A	4/5/19	4/8/19 10:38	AYH
Aroclor-1242 [1]	ND	0.12	µg/L	1		SW-846 8082A	4/5/19	4/8/19 10:38	AYH
Aroclor-1248 [1]	ND	0.12	µg/L	1		SW-846 8082A	4/5/19	4/8/19 10:38	AYH
Aroclor-1254 [1]	ND	0.12	µg/L	1		SW-846 8082A	4/5/19	4/8/19 10:38	AYH
Aroclor-1260 [1]	ND	0.12	µg/L	1		SW-846 8082A	4/5/19	4/8/19 10:38	AYH
Aroclor-1262 [1]	ND	0.12	µg/L	1		SW-846 8082A	4/5/19	4/8/19 10:38	AYH
Aroclor-1268 [1]	ND	0.12	µg/L	1		SW-846 8082A	4/5/19	4/8/19 10:38	AYH
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		81.8	30-150					4/8/19 10:38	
Decachlorobiphenyl [2]		74.0	30-150					4/8/19 10:38	
Tetrachloro-m-xylene [1]		77.2	30-150					4/8/19 10:38	
Tetrachloro-m-xylene [2]		74.6	30-150					4/8/19 10:38	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19D0106

Date Received: 4/2/2019

Field Sample #: V-106 (MW)

Sampled: 4/2/2019 09:30

Sample ID: 19D0106-02

Sample Matrix: Ground Water

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.0	µg/L	1		SW-846 6020B	4/5/19	4/8/19 12:58	QNW
Arsenic	1.6	0.40	µg/L	1		SW-846 6020B	4/5/19	4/8/19 12:58	QNW
Barium	190	50	µg/L	5		SW-846 6020B	4/5/19	4/9/19 14:16	QNW
Beryllium	ND	0.40	µg/L	1		SW-846 6020B	4/5/19	4/8/19 12:58	QNW
Cadmium	3.0	0.50	µg/L	1		SW-846 6020B	4/5/19	4/8/19 12:58	QNW
Chromium	2.8	1.0	µg/L	1		SW-846 6020B	4/5/19	4/8/19 12:58	QNW
Copper	6.9	5.0	µg/L	1		SW-846 6020B	4/5/19	4/8/19 12:58	QNW
Lead	1.6	1.0	µg/L	1		SW-846 6020B	4/5/19	4/8/19 12:58	QNW
Manganese	5400	200	µg/L	200		SW-846 6020B	4/5/19	4/9/19 15:08	QNW
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	4/8/19	4/8/19 14:22	EJB
Nickel	110	25	µg/L	5		SW-846 6020B	4/5/19	4/9/19 14:16	QNW
Selenium	ND	5.0	µg/L	1		SW-846 6020B	4/5/19	4/8/19 12:58	QNW
Silver	ND	0.50	µg/L	1		SW-846 6020B	4/5/19	4/8/19 12:58	QNW
Thallium	ND	0.20	µg/L	1		SW-846 6020B	4/5/19	4/8/19 12:58	QNW
Vanadium	ND	5.0	µg/L	1		SW-846 6020B	4/5/19	4/8/19 12:58	QNW
Zinc	33	10	µg/L	1		SW-846 6020B	4/5/19	4/8/19 12:58	QNW

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Project Location: Wayland, MA

Sample Description:

Work Order: 19D0106

Date Received: 4/2/2019

Field Sample #: V-106 (MW)

Sampled: 4/2/2019 09:30

Sample ID: 19D0106-02

Sample Matrix: Ground Water

**Metals Analyses (Dissolved)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	1.0	0.40	µg/L	1		SW-846 6020B	4/5/19	4/8/19 11:21	QNW
Nickel	110	10	µg/L	2		SW-846 6020B	4/5/19	4/23/19 9:09	MJH

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Project Location: Wayland, MA

Sample Description:

Work Order: 19D0106

Date Received: 4/2/2019

Field Sample #: V-106 (MW)

Sampled: 4/2/2019 09:30

Sample ID: 19D0106-02

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	2.0	0.30	mg/L	1		SM19-22 4500 NH3 C	4/5/19	4/6/19 11:58	KMV
Chloride	210	10	mg/L	10		EPA 300.0	4/9/19	4/9/19 6:03	MMH
Nitrate as N	35	1.0	mg/L	10		EPA 300.0	4/3/19	4/3/19 16:33	IS
Nitrite as N	0.302	0.100	mg/L	1		EPA 300.0	4/3/19	4/3/19 16:18	IS
Orthophosphate as P	ND	0.050	mg/L	1	W-17	SM 21-22 4500 P E	4/2/19	4/2/19 18:30	IS
Phosphorus, Total	0.093	0.062	mg/L	1.25		SM 21-22 4500 P E	4/7/19	4/7/19 15:06	AIA
Total Kjeldahl Nitrogen	4.0	1.0	mg/L	1		SM19-22 4500-N Org B,C-NH3 C	4/3/19	4/4/19 9:45	EC
Total Nitrogen	39	0.050	mg/L	1		SM19-22 4500-N Org B,C-NH3 C	4/8/19	4/8/19 14:50	LL

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Project Location: Wayland, MA

Sample Description:

Work Order: 19D0106

Date Received: 4/2/2019

Field Sample #: V-104 (MW)

Sampled: 4/2/2019 12:15

Sample ID: 19D0106-03

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	10	µg/L	1	R-05	SW-846 8260C	4/4/19	4/5/19 6:59	EEH
tert-Amyl Methyl Ether (TAME)	ND	2.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:59	EEH
Benzene	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:59	EEH
Bromobenzene	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:59	EEH
Bromochloromethane	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:59	EEH
Bromodichloromethane	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:59	EEH
Bromoform	ND	2.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:59	EEH
Bromomethane	ND	2.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:59	EEH
2-Butanone (MEK)	ND	10	µg/L	1	V-05	SW-846 8260C	4/4/19	4/5/19 6:59	EEH
n-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:59	EEH
sec-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:59	EEH
tert-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:59	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:59	EEH
Carbon Disulfide	ND	5.0	µg/L	1	RL-07	SW-846 8260C	4/4/19	4/5/19 6:59	EEH
Carbon Tetrachloride	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:59	EEH
Chlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:59	EEH
Chlorodibromomethane	ND	0.50	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:59	EEH
Chloroethane	ND	2.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:59	EEH
Chloroform	ND	2.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:59	EEH
Chloromethane	ND	2.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:59	EEH
2-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:59	EEH
4-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:59	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	µg/L	1	RL-07	SW-846 8260C	4/4/19	4/5/19 6:59	EEH
1,2-Dibromoethane (EDB)	ND	0.50	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:59	EEH
Dibromomethane	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:59	EEH
1,2-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:59	EEH
1,3-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:59	EEH
1,4-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:59	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:59	EEH
1,1-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:59	EEH
1,2-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:59	EEH
1,1-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:59	EEH
cis-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:59	EEH
trans-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:59	EEH
1,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:59	EEH
1,3-Dichloropropane	ND	0.50	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:59	EEH
2,2-Dichloropropane	ND	1.0	µg/L	1	V-05	SW-846 8260C	4/4/19	4/5/19 6:59	EEH
1,1-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:59	EEH
cis-1,3-Dichloropropene	ND	0.40	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:59	EEH
trans-1,3-Dichloropropene	ND	0.40	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:59	EEH
Diethyl Ether	ND	2.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:59	EEH
Diisopropyl Ether (DIPE)	ND	0.50	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:59	EEH
1,4-Dioxane	ND	50	µg/L	1	V-16	SW-846 8260C	4/4/19	4/5/19 6:59	EEH
Ethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:59	EEH



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Project Location: Wayland, MA

Sample Description:

Work Order: 19D0106

Date Received: 4/2/2019

Field Sample #: V-104 (MW)

Sampled: 4/2/2019 12:15

Sample ID: 19D0106-03

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.60	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:59	EEH
2-Hexanone (MBK)	ND	10	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:59	EEH
Isopropylbenzene (Cumene)	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:59	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:59	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:59	EEH
Methylene Chloride	ND	5.0	µg/L	1	RL-07	SW-846 8260C	4/4/19	4/5/19 6:59	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:59	EEH
Naphthalene	ND	5.0	µg/L	1	RL-07	SW-846 8260C	4/4/19	4/5/19 6:59	EEH
n-Propylbenzene	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:59	EEH
Styrene	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:59	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:59	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1	R-05	SW-846 8260C	4/4/19	4/5/19 6:59	EEH
Tetrachloroethylene	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:59	EEH
Tetrahydrofuran	ND	2.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:59	EEH
Toluene	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:59	EEH
1,2,3-Trichlorobenzene	ND	5.0	µg/L	1	RL-07	SW-846 8260C	4/4/19	4/5/19 6:59	EEH
1,2,4-Trichlorobenzene	ND	5.0	µg/L	1	RL-07	SW-846 8260C	4/4/19	4/5/19 6:59	EEH
1,1,1-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:59	EEH
1,1,2-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:59	EEH
Trichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:59	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:59	EEH
1,2,3-Trichloropropane	ND	2.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:59	EEH
1,2,4-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:59	EEH
1,3,5-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:59	EEH
Vinyl Chloride	ND	2.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:59	EEH
m+p Xylene	ND	2.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:59	EEH
o-Xylene	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 6:59	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	92.8	70-130	4/5/19 6:59
Toluene-d8	100	70-130	4/5/19 6:59
4-Bromofluorobenzene	102	70-130	4/5/19 6:59

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Project Location: Wayland, MA

Sample Description:

Work Order: 19D0106

Date Received: 4/2/2019

Field Sample #: V-104 (MW)

Sampled: 4/2/2019 12:15

Sample ID: 19D0106-03

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	5.5	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:34	BGL
Acenaphthylene	ND	5.5	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:34	BGL
Acetophenone	ND	11	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:34	BGL
Aniline	ND	5.5	µg/L	1	V-34	SW-846 8270D	4/4/19	4/5/19 18:34	BGL
Anthracene	ND	5.5	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:34	BGL
Benzo(a)anthracene	ND	5.5	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:34	BGL
Benzo(a)pyrene	ND	5.5	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:34	BGL
Benzo(b)fluoranthene	ND	5.5	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:34	BGL
Benzo(g,h,i)perylene	ND	5.5	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:34	BGL
Benzo(k)fluoranthene	ND	5.5	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:34	BGL
Bis(2-chloroethoxy)methane	ND	11	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:34	BGL
Bis(2-chloroethyl)ether	ND	11	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:34	BGL
Bis(2-chloroisopropyl)ether	ND	11	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:34	BGL
Bis(2-Ethylhexyl)phthalate	ND	11	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:34	BGL
4-Bromophenylphenylether	ND	11	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:34	BGL
Butylbenzylphthalate	ND	11	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:34	BGL
4-Chloroaniline	ND	11	µg/L	1	V-34	SW-846 8270D	4/4/19	4/5/19 18:34	BGL
2-Chloronaphthalene	ND	11	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:34	BGL
2-Chlorophenol	ND	11	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:34	BGL
Chrysene	ND	5.5	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:34	BGL
Dibenz(a,h)anthracene	ND	5.5	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:34	BGL
Dibenzofuran	ND	5.5	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:34	BGL
Di-n-butylphthalate	ND	11	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:34	BGL
1,2-Dichlorobenzene	ND	5.5	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:34	BGL
1,3-Dichlorobenzene	ND	5.5	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:34	BGL
1,4-Dichlorobenzene	ND	5.5	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:34	BGL
3,3-Dichlorobenzidine	ND	11	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:34	BGL
2,4-Dichlorophenol	ND	11	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:34	BGL
Diethylphthalate	ND	11	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:34	BGL
2,4-Dimethylphenol	ND	11	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:34	BGL
Dimethylphthalate	ND	11	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:34	BGL
2,4-Dinitrophenol	ND	11	µg/L	1	V-05	SW-846 8270D	4/4/19	4/5/19 18:34	BGL
2,4-Dinitrotoluene	ND	11	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:34	BGL
2,6-Dinitrotoluene	ND	11	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:34	BGL
Di-n-octylphthalate	ND	11	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:34	BGL
1,2-Diphenylhydrazine/Azobenzene	ND	11	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:34	BGL
Fluoranthene	ND	5.5	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:34	BGL
Fluorene	ND	5.5	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:34	BGL
Hexachlorobenzene	ND	11	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:34	BGL
Hexachlorobutadiene	ND	11	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:34	BGL
Hexachloroethane	ND	11	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:34	BGL
Indeno(1,2,3-cd)pyrene	ND	5.5	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:34	BGL
Isophorone	ND	11	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:34	BGL
2-Methylnaphthalene	ND	5.5	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:34	BGL

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19D0106

Date Received: 4/2/2019

Field Sample #: V-104 (MW)

Sampled: 4/2/2019 12:15

Sample ID: 19D0106-03

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-Methylphenol	ND	11	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:34	BGL
3/4-Methylphenol	ND	11	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:34	BGL
Naphthalene	ND	5.5	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:34	BGL
Nitrobenzene	ND	11	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:34	BGL
2-Nitrophenol	ND	11	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:34	BGL
4-Nitrophenol	ND	11	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:34	BGL
Pentachlorophenol	ND	11	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:34	BGL
Phenanthrene	ND	5.5	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:34	BGL
Phenol	ND	11	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:34	BGL
Pyrene	ND	5.5	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:34	BGL
1,2,4-Trichlorobenzene	ND	5.5	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:34	BGL
2,4,5-Trichlorophenol	ND	11	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:34	BGL
2,4,6-Trichlorophenol	ND	11	µg/L	1		SW-846 8270D	4/4/19	4/5/19 18:34	BGL
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2-Fluorophenol		47.9	15-110					4/5/19 18:34	
Phenol-d6		35.0	15-110					4/5/19 18:34	
Nitrobenzene-d5		72.0	30-130					4/5/19 18:34	
2-Fluorobiphenyl		75.9	30-130					4/5/19 18:34	
2,4,6-Tribromophenol		74.9	15-110					4/5/19 18:34	
p-Terphenyl-d14		88.2	30-130					4/5/19 18:34	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19D0106

Date Received: 4/2/2019

Field Sample #: V-104 (MW)

Sampled: 4/2/2019 12:15

Sample ID: 19D0106-03

Sample Matrix: Ground Water

**Polychlorinated Biphenyls By GC/ECD**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.11	µg/L	1		SW-846 8082A	4/5/19	4/8/19 10:51	AYH
Aroclor-1221 [1]	ND	0.11	µg/L	1		SW-846 8082A	4/5/19	4/8/19 10:51	AYH
Aroclor-1232 [1]	ND	0.11	µg/L	1		SW-846 8082A	4/5/19	4/8/19 10:51	AYH
Aroclor-1242 [1]	ND	0.11	µg/L	1		SW-846 8082A	4/5/19	4/8/19 10:51	AYH
Aroclor-1248 [1]	ND	0.11	µg/L	1		SW-846 8082A	4/5/19	4/8/19 10:51	AYH
Aroclor-1254 [1]	ND	0.11	µg/L	1		SW-846 8082A	4/5/19	4/8/19 10:51	AYH
Aroclor-1260 [1]	ND	0.11	µg/L	1		SW-846 8082A	4/5/19	4/8/19 10:51	AYH
Aroclor-1262 [1]	ND	0.11	µg/L	1		SW-846 8082A	4/5/19	4/8/19 10:51	AYH
Aroclor-1268 [1]	ND	0.11	µg/L	1		SW-846 8082A	4/5/19	4/8/19 10:51	AYH
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		81.1	30-150					4/8/19 10:51	
Decachlorobiphenyl [2]		72.8	30-150					4/8/19 10:51	
Tetrachloro-m-xylene [1]		82.5	30-150					4/8/19 10:51	
Tetrachloro-m-xylene [2]		79.7	30-150					4/8/19 10:51	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19D0106

Date Received: 4/2/2019

Field Sample #: V-104 (MW)

Sampled: 4/2/2019 12:15

Sample ID: 19D0106-03

Sample Matrix: Ground Water

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.0	µg/L	1		SW-846 6020B	4/5/19	4/8/19 13:13	QNW
Arsenic	0.50	0.40	µg/L	1		SW-846 6020B	4/5/19	4/8/19 13:13	QNW
Barium	14	10	µg/L	1		SW-846 6020B	4/5/19	4/8/19 13:13	QNW
Beryllium	ND	0.40	µg/L	1		SW-846 6020B	4/5/19	4/8/19 13:13	QNW
Cadmium	ND	0.50	µg/L	1		SW-846 6020B	4/5/19	4/8/19 13:13	QNW
Chromium	ND	1.0	µg/L	1		SW-846 6020B	4/5/19	4/8/19 13:13	QNW
Copper	ND	5.0	µg/L	1		SW-846 6020B	4/5/19	4/8/19 13:13	QNW
Lead	ND	1.0	µg/L	1		SW-846 6020B	4/5/19	4/8/19 13:13	QNW
Manganese	95	1.0	µg/L	1		SW-846 6020B	4/5/19	4/8/19 13:13	QNW
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	4/8/19	4/8/19 14:35	EJB
Nickel	ND	5.0	µg/L	1		SW-846 6020B	4/5/19	4/8/19 13:13	QNW
Selenium	ND	5.0	µg/L	1		SW-846 6020B	4/5/19	4/8/19 13:13	QNW
Silver	ND	0.50	µg/L	1		SW-846 6020B	4/5/19	4/8/19 13:13	QNW
Thallium	ND	0.20	µg/L	1		SW-846 6020B	4/5/19	4/8/19 13:13	QNW
Vanadium	ND	5.0	µg/L	1		SW-846 6020B	4/5/19	4/8/19 13:13	QNW
Zinc	ND	10	µg/L	1		SW-846 6020B	4/5/19	4/8/19 13:13	QNW

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Project Location: Wayland, MA

Sample Description:

Work Order: 19D0106

Date Received: 4/2/2019

Field Sample #: V-104 (MW)

Sampled: 4/2/2019 12:15

Sample ID: 19D0106-03

Sample Matrix: Ground Water

**Metals Analyses (Dissolved)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	0.79	0.40	µg/L	1		SW-846 6020B	4/5/19	4/8/19 13:34	QNW

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Project Location: Wayland, MA

Sample Description:

Work Order: 19D0106

Date Received: 4/2/2019

Field Sample #: V-104 (MW)

Sampled: 4/2/2019 12:15

Sample ID: 19D0106-03

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	ND	0.30	mg/L	1		SM19-22 4500 NH3 C	4/5/19	4/6/19 11:58	KMV
Chloride	26	1.0	mg/L	1	MS-07	EPA 300.0	4/9/19	4/9/19 6:18	MMH
Nitrate as N	2.1	0.10	mg/L	1		EPA 300.0	4/3/19	4/3/19 16:48	IS
Nitrite as N	ND	0.100	mg/L	1		EPA 300.0	4/3/19	4/3/19 16:48	IS
Orthophosphate as P	ND	0.050	mg/L	1	W-17	SM 21-22 4500 P E	4/2/19	4/2/19 18:30	IS
Phosphorus, Total	ND	0.062	mg/L	1.25		SM 21-22 4500 P E	4/7/19	4/7/19 15:06	AIA
Total Kjeldahl Nitrogen	2.0	1.0	mg/L	1		SM19-22 4500-N Org B,C-NH3 C	4/3/19	4/4/19 9:45	EC
Total Nitrogen	4.1	0.050	mg/L	1		SM19-22 4500-N Org B,C-NH3 C	4/8/19	4/8/19 14:50	LL

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Project Location: Wayland, MA

Sample Description:

Work Order: 19D0106

Date Received: 4/2/2019

Field Sample #: MW-3

Sampled: 4/2/2019 14:35

Sample ID: 19D0106-04

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	10	µg/L	1	R-05	SW-846 8260C	4/4/19	4/5/19 7:26	EEH
tert-Amyl Methyl Ether (TAME)	ND	2.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 7:26	EEH
Benzene	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 7:26	EEH
Bromobenzene	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 7:26	EEH
Bromochloromethane	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 7:26	EEH
Bromodichloromethane	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 7:26	EEH
Bromoform	ND	2.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 7:26	EEH
Bromomethane	ND	2.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 7:26	EEH
2-Butanone (MEK)	ND	10	µg/L	1	V-05	SW-846 8260C	4/4/19	4/5/19 7:26	EEH
n-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 7:26	EEH
sec-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 7:26	EEH
tert-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 7:26	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	µg/L	1		SW-846 8260C	4/4/19	4/5/19 7:26	EEH
Carbon Disulfide	ND	5.0	µg/L	1	RL-07	SW-846 8260C	4/4/19	4/5/19 7:26	EEH
Carbon Tetrachloride	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 7:26	EEH
Chlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 7:26	EEH
Chlorodibromomethane	ND	0.50	µg/L	1		SW-846 8260C	4/4/19	4/5/19 7:26	EEH
Chloroethane	ND	2.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 7:26	EEH
Chloroform	ND	2.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 7:26	EEH
Chloromethane	ND	2.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 7:26	EEH
2-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 7:26	EEH
4-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 7:26	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	µg/L	1	RL-07	SW-846 8260C	4/4/19	4/5/19 7:26	EEH
1,2-Dibromoethane (EDB)	ND	0.50	µg/L	1		SW-846 8260C	4/4/19	4/5/19 7:26	EEH
Dibromomethane	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 7:26	EEH
1,2-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 7:26	EEH
1,3-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 7:26	EEH
1,4-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 7:26	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 7:26	EEH
1,1-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 7:26	EEH
1,2-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 7:26	EEH
1,1-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 7:26	EEH
cis-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 7:26	EEH
trans-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 7:26	EEH
1,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 7:26	EEH
1,3-Dichloropropane	ND	0.50	µg/L	1		SW-846 8260C	4/4/19	4/5/19 7:26	EEH
2,2-Dichloropropane	ND	1.0	µg/L	1	V-05	SW-846 8260C	4/4/19	4/5/19 7:26	EEH
1,1-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260C	4/4/19	4/5/19 7:26	EEH
cis-1,3-Dichloropropene	ND	0.40	µg/L	1		SW-846 8260C	4/4/19	4/5/19 7:26	EEH
trans-1,3-Dichloropropene	ND	0.40	µg/L	1		SW-846 8260C	4/4/19	4/5/19 7:26	EEH
Diethyl Ether	ND	2.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 7:26	EEH
Diisopropyl Ether (DIPE)	ND	0.50	µg/L	1		SW-846 8260C	4/4/19	4/5/19 7:26	EEH
1,4-Dioxane	ND	50	µg/L	1	V-16	SW-846 8260C	4/4/19	4/5/19 7:26	EEH
Ethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 7:26	EEH



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

Project Location: Wayland, MA

Sample Description:

Work Order: 19D0106

Date Received: 4/2/2019

Field Sample #: MW-3

Sampled: 4/2/2019 14:35

Sample ID: 19D0106-04

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.60	µg/L	1		SW-846 8260C	4/4/19	4/5/19 7:26	EEH
2-Hexanone (MBK)	ND	10	µg/L	1		SW-846 8260C	4/4/19	4/5/19 7:26	EEH
Isopropylbenzene (Cumene)	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 7:26	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 7:26	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 7:26	EEH
Methylene Chloride	ND	5.0	µg/L	1	RL-07	SW-846 8260C	4/4/19	4/5/19 7:26	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	µg/L	1		SW-846 8260C	4/4/19	4/5/19 7:26	EEH
Naphthalene	ND	5.0	µg/L	1	RL-07	SW-846 8260C	4/4/19	4/5/19 7:26	EEH
n-Propylbenzene	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 7:26	EEH
Styrene	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 7:26	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 7:26	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1	R-05	SW-846 8260C	4/4/19	4/5/19 7:26	EEH
Tetrachloroethylene	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 7:26	EEH
Tetrahydrofuran	ND	2.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 7:26	EEH
Toluene	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 7:26	EEH
1,2,3-Trichlorobenzene	ND	5.0	µg/L	1	RL-07	SW-846 8260C	4/4/19	4/5/19 7:26	EEH
1,2,4-Trichlorobenzene	ND	5.0	µg/L	1	RL-07	SW-846 8260C	4/4/19	4/5/19 7:26	EEH
1,1,1-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 7:26	EEH
1,1,2-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 7:26	EEH
Trichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 7:26	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 7:26	EEH
1,2,3-Trichloropropane	ND	2.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 7:26	EEH
1,2,4-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 7:26	EEH
1,3,5-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 7:26	EEH
Vinyl Chloride	ND	2.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 7:26	EEH
m+p Xylene	ND	2.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 7:26	EEH
o-Xylene	ND	1.0	µg/L	1		SW-846 8260C	4/4/19	4/5/19 7:26	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	90.8	70-130	4/5/19 7:26
Toluene-d8	99.1	70-130	4/5/19 7:26
4-Bromofluorobenzene	102	70-130	4/5/19 7:26

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19D0106

Date Received: 4/2/2019

Field Sample #: MW-3

Sampled: 4/2/2019 14:35

Sample ID: 19D0106-04

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	5.3	µg/L	1		SW-846 8270D	4/4/19	4/6/19 17:13	BGL
Acenaphthylene	ND	5.3	µg/L	1		SW-846 8270D	4/4/19	4/6/19 17:13	BGL
Acetophenone	ND	11	µg/L	1		SW-846 8270D	4/4/19	4/6/19 17:13	BGL
Aniline	ND	5.3	µg/L	1	V-34	SW-846 8270D	4/4/19	4/6/19 17:13	BGL
Anthracene	ND	5.3	µg/L	1		SW-846 8270D	4/4/19	4/6/19 17:13	BGL
Benzo(a)anthracene	ND	5.3	µg/L	1		SW-846 8270D	4/4/19	4/6/19 17:13	BGL
Benzo(a)pyrene	ND	5.3	µg/L	1		SW-846 8270D	4/4/19	4/6/19 17:13	BGL
Benzo(b)fluoranthene	ND	5.3	µg/L	1		SW-846 8270D	4/4/19	4/6/19 17:13	BGL
Benzo(g,h,i)perylene	ND	5.3	µg/L	1		SW-846 8270D	4/4/19	4/6/19 17:13	BGL
Benzo(k)fluoranthene	ND	5.3	µg/L	1		SW-846 8270D	4/4/19	4/6/19 17:13	BGL
Bis(2-chloroethoxy)methane	ND	11	µg/L	1		SW-846 8270D	4/4/19	4/6/19 17:13	BGL
Bis(2-chloroethyl)ether	ND	11	µg/L	1		SW-846 8270D	4/4/19	4/6/19 17:13	BGL
Bis(2-chloroisopropyl)ether	ND	11	µg/L	1		SW-846 8270D	4/4/19	4/6/19 17:13	BGL
Bis(2-Ethylhexyl)phthalate	ND	11	µg/L	1		SW-846 8270D	4/4/19	4/6/19 17:13	BGL
4-Bromophenylphenylether	ND	11	µg/L	1		SW-846 8270D	4/4/19	4/6/19 17:13	BGL
Butylbenzylphthalate	ND	11	µg/L	1		SW-846 8270D	4/4/19	4/6/19 17:13	BGL
4-Chloroaniline	ND	11	µg/L	1	R-05, V-34	SW-846 8270D	4/4/19	4/6/19 17:13	BGL
2-Chloronaphthalene	ND	11	µg/L	1		SW-846 8270D	4/4/19	4/6/19 17:13	BGL
2-Chlorophenol	ND	11	µg/L	1		SW-846 8270D	4/4/19	4/6/19 17:13	BGL
Chrysene	ND	5.3	µg/L	1		SW-846 8270D	4/4/19	4/6/19 17:13	BGL
Dibenz(a,h)anthracene	ND	5.3	µg/L	1		SW-846 8270D	4/4/19	4/6/19 17:13	BGL
Dibenzofuran	ND	5.3	µg/L	1		SW-846 8270D	4/4/19	4/6/19 17:13	BGL
Di-n-butylphthalate	ND	11	µg/L	1		SW-846 8270D	4/4/19	4/6/19 17:13	BGL
1,2-Dichlorobenzene	ND	5.3	µg/L	1		SW-846 8270D	4/4/19	4/6/19 17:13	BGL
1,3-Dichlorobenzene	ND	5.3	µg/L	1		SW-846 8270D	4/4/19	4/6/19 17:13	BGL
1,4-Dichlorobenzene	ND	5.3	µg/L	1		SW-846 8270D	4/4/19	4/6/19 17:13	BGL
3,3-Dichlorobenzidine	ND	11	µg/L	1		SW-846 8270D	4/4/19	4/6/19 17:13	BGL
2,4-Dichlorophenol	ND	11	µg/L	1		SW-846 8270D	4/4/19	4/6/19 17:13	BGL
Diethylphthalate	ND	11	µg/L	1		SW-846 8270D	4/4/19	4/6/19 17:13	BGL
2,4-Dimethylphenol	ND	11	µg/L	1		SW-846 8270D	4/4/19	4/6/19 17:13	BGL
Dimethylphthalate	ND	11	µg/L	1		SW-846 8270D	4/4/19	4/6/19 17:13	BGL
2,4-Dinitrophenol	ND	11	µg/L	1		SW-846 8270D	4/4/19	4/6/19 17:13	BGL
2,4-Dinitrotoluene	ND	11	µg/L	1		SW-846 8270D	4/4/19	4/6/19 17:13	BGL
2,6-Dinitrotoluene	ND	11	µg/L	1		SW-846 8270D	4/4/19	4/6/19 17:13	BGL
Di-n-octylphthalate	ND	11	µg/L	1		SW-846 8270D	4/4/19	4/6/19 17:13	BGL
1,2-Diphenylhydrazine/Azobenzene	ND	11	µg/L	1		SW-846 8270D	4/4/19	4/6/19 17:13	BGL
Fluoranthene	ND	5.3	µg/L	1		SW-846 8270D	4/4/19	4/6/19 17:13	BGL
Fluorene	ND	5.3	µg/L	1		SW-846 8270D	4/4/19	4/6/19 17:13	BGL
Hexachlorobenzene	ND	11	µg/L	1		SW-846 8270D	4/4/19	4/6/19 17:13	BGL
Hexachlorobutadiene	ND	11	µg/L	1		SW-846 8270D	4/4/19	4/6/19 17:13	BGL
Hexachloroethane	ND	11	µg/L	1		SW-846 8270D	4/4/19	4/6/19 17:13	BGL
Indeno(1,2,3-cd)pyrene	ND	5.3	µg/L	1		SW-846 8270D	4/4/19	4/6/19 17:13	BGL
Isophorone	ND	11	µg/L	1		SW-846 8270D	4/4/19	4/6/19 17:13	BGL
2-Methylnaphthalene	ND	5.3	µg/L	1		SW-846 8270D	4/4/19	4/6/19 17:13	BGL

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Project Location: Wayland, MA

Sample Description:

Work Order: 19D0106

Date Received: 4/2/2019

Field Sample #: MW-3

Sampled: 4/2/2019 14:35

Sample ID: 19D0106-04

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-Methylphenol	ND	11	µg/L	1		SW-846 8270D	4/4/19	4/6/19 17:13	BGL
3/4-Methylphenol	ND	11	µg/L	1		SW-846 8270D	4/4/19	4/6/19 17:13	BGL
Naphthalene	ND	5.3	µg/L	1		SW-846 8270D	4/4/19	4/6/19 17:13	BGL
Nitrobenzene	ND	11	µg/L	1		SW-846 8270D	4/4/19	4/6/19 17:13	BGL
2-Nitrophenol	ND	11	µg/L	1		SW-846 8270D	4/4/19	4/6/19 17:13	BGL
4-Nitrophenol	ND	11	µg/L	1		SW-846 8270D	4/4/19	4/6/19 17:13	BGL
Pentachlorophenol	ND	11	µg/L	1		SW-846 8270D	4/4/19	4/6/19 17:13	BGL
Phenanthrene	ND	5.3	µg/L	1		SW-846 8270D	4/4/19	4/6/19 17:13	BGL
Phenol	ND	11	µg/L	1	R-05	SW-846 8270D	4/4/19	4/6/19 17:13	BGL
Pyrene	ND	5.3	µg/L	1		SW-846 8270D	4/4/19	4/6/19 17:13	BGL
1,2,4-Trichlorobenzene	ND	5.3	µg/L	1		SW-846 8270D	4/4/19	4/6/19 17:13	BGL
2,4,5-Trichlorophenol	ND	11	µg/L	1		SW-846 8270D	4/4/19	4/6/19 17:13	BGL
2,4,6-Trichlorophenol	ND	11	µg/L	1		SW-846 8270D	4/4/19	4/6/19 17:13	BGL

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	42.7	15-110	
Phenol-d6	32.0	15-110	
Nitrobenzene-d5	70.7	30-130	
2-Fluorobiphenyl	67.9	30-130	
2,4,6-Tribromophenol	78.4	15-110	
p-Terphenyl-d14	83.7	30-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19D0106

Date Received: 4/2/2019

Field Sample #: MW-3

Sampled: 4/2/2019 14:35

Sample ID: 19D0106-04

Sample Matrix: Ground Water

**Polychlorinated Biphenyls By GC/ECD**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.093	µg/L	1		SW-846 8082A	4/5/19	4/8/19 11:03	AYH
Aroclor-1221 [1]	ND	0.093	µg/L	1		SW-846 8082A	4/5/19	4/8/19 11:03	AYH
Aroclor-1232 [1]	ND	0.093	µg/L	1		SW-846 8082A	4/5/19	4/8/19 11:03	AYH
Aroclor-1242 [1]	ND	0.093	µg/L	1		SW-846 8082A	4/5/19	4/8/19 11:03	AYH
Aroclor-1248 [1]	ND	0.093	µg/L	1		SW-846 8082A	4/5/19	4/8/19 11:03	AYH
Aroclor-1254 [1]	ND	0.093	µg/L	1		SW-846 8082A	4/5/19	4/8/19 11:03	AYH
Aroclor-1260 [1]	ND	0.093	µg/L	1		SW-846 8082A	4/5/19	4/8/19 11:03	AYH
Aroclor-1262 [1]	ND	0.093	µg/L	1		SW-846 8082A	4/5/19	4/8/19 11:03	AYH
Aroclor-1268 [1]	ND	0.093	µg/L	1		SW-846 8082A	4/5/19	4/8/19 11:03	AYH
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		74.0	30-150					4/8/19 11:03	
Decachlorobiphenyl [2]		67.6	30-150					4/8/19 11:03	
Tetrachloro-m-xylene [1]		83.5	30-150					4/8/19 11:03	
Tetrachloro-m-xylene [2]		80.4	30-150					4/8/19 11:03	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19D0106

Date Received: 4/2/2019

Field Sample #: MW-3

Sampled: 4/2/2019 14:35

Sample ID: 19D0106-04

Sample Matrix: Ground Water

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.0	µg/L	1		SW-846 6020B	4/5/19	4/8/19 13:17	QNW
Arsenic	ND	0.40	µg/L	1		SW-846 6020B	4/5/19	4/8/19 13:17	QNW
Barium	13	10	µg/L	1		SW-846 6020B	4/5/19	4/8/19 13:17	QNW
Beryllium	ND	0.40	µg/L	1		SW-846 6020B	4/5/19	4/8/19 13:17	QNW
Cadmium	ND	0.50	µg/L	1		SW-846 6020B	4/5/19	4/8/19 13:17	QNW
Chromium	ND	1.0	µg/L	1		SW-846 6020B	4/5/19	4/8/19 13:17	QNW
Copper	ND	5.0	µg/L	1		SW-846 6020B	4/5/19	4/8/19 13:17	QNW
Lead	ND	1.0	µg/L	1		SW-846 6020B	4/5/19	4/8/19 13:17	QNW
Manganese	73	1.0	µg/L	1		SW-846 6020B	4/5/19	4/8/19 13:17	QNW
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	4/8/19	4/8/19 14:41	EJB
Nickel	ND	5.0	µg/L	1		SW-846 6020B	4/5/19	4/8/19 13:17	QNW
Selenium	ND	5.0	µg/L	1		SW-846 6020B	4/5/19	4/8/19 13:17	QNW
Silver	ND	0.50	µg/L	1		SW-846 6020B	4/5/19	4/8/19 13:17	QNW
Thallium	ND	0.20	µg/L	1		SW-846 6020B	4/5/19	4/8/19 13:17	QNW
Vanadium	ND	5.0	µg/L	1		SW-846 6020B	4/5/19	4/8/19 13:17	QNW
Zinc	ND	10	µg/L	1		SW-846 6020B	4/5/19	4/8/19 13:17	QNW

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Project Location: Wayland, MA

Sample Description:

Work Order: 19D0106

Date Received: 4/2/2019

Field Sample #: MW-3

Sampled: 4/2/2019 14:35

Sample ID: 19D0106-04

Sample Matrix: Ground Water

**Metals Analyses (Dissolved)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	0.74	0.40	µg/L	1		SW-846 6020B	4/5/19	4/8/19 13:37	QNW

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Project Location: Wayland, MA

Sample Description:

Work Order: 19D0106

Date Received: 4/2/2019

Field Sample #: MW-3

Sampled: 4/2/2019 14:35

Sample ID: 19D0106-04

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	ND	0.30	mg/L	1		SM19-22 4500 NH3 C	4/5/19	4/6/19 11:58	KMV
Chloride	120	10	mg/L	10		EPA 300.0	4/9/19	4/9/19 7:04	MMH
Nitrate as N	1.5	0.10	mg/L	1		EPA 300.0	4/3/19	4/3/19 17:49	IS
Nitrite as N	ND	0.100	mg/L	1		EPA 300.0	4/3/19	4/3/19 17:49	IS
Orthophosphate as P	ND	0.050	mg/L	1	W-17	SM 21-22 4500 P E	4/2/19	4/2/19 18:30	IS
Phosphorus, Total	ND	0.062	mg/L	1.25		SM 21-22 4500 P E	4/7/19	4/7/19 15:06	AIA
Total Kjeldahl Nitrogen	2.0	1.0	mg/L	1		SM19-22 4500-N Org B,C-NH3 C	4/3/19	4/4/19 9:45	EC
Total Nitrogen	3.5	0.050	mg/L	1		SM19-22 4500-N Org B,C-NH3 C	4/8/19	4/8/19 14:50	LL

**Sample Extraction Data**

**Prep Method: EPA 300.0-EPA 300.0**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
19D0106-01 [V-103 (MW)]	B227277	10.0	10.0	04/03/19
19D0106-02 [V-106 (MW)]	B227277	10.0	10.0	04/03/19
19D0106-03 [V-104 (MW)]	B227277	10.0	10.0	04/03/19
19D0106-04 [MW-3]	B227277	10.0	10.0	04/03/19

**Prep Method: EPA 300.0-EPA 300.0**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
19D0106-01 [V-103 (MW)]	B227612	10.0	10.0	04/09/19
19D0106-02 [V-106 (MW)]	B227612	10.0	10.0	04/09/19
19D0106-03 [V-104 (MW)]	B227612	10.0	10.0	04/09/19
19D0106-04 [MW-3]	B227612	10.0	10.0	04/09/19

**SM 21-22 4500 P E**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
19D0106-01 [V-103 (MW)]	B227283	50.0	50.0	04/02/19
19D0106-02 [V-106 (MW)]	B227283	50.0	50.0	04/02/19
19D0106-03 [V-104 (MW)]	B227283	50.0	50.0	04/02/19
19D0106-04 [MW-3]	B227283	50.0	50.0	04/02/19

**SM 21-22 4500 P E**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
19D0106-01 [V-103 (MW)]	B227568	50.0	50.0	04/07/19
19D0106-02 [V-106 (MW)]	B227568	50.0	50.0	04/07/19
19D0106-03 [V-104 (MW)]	B227568	50.0	50.0	04/07/19
19D0106-04 [MW-3]	B227568	50.0	50.0	04/07/19

**SM19-22 4500 NH3 C**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
19D0106-01 [V-103 (MW)]	B227200	100	100	04/02/19

**SM19-22 4500 NH3 C**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
19D0106-02 [V-106 (MW)]	B227529	100	100	04/05/19
19D0106-03 [V-104 (MW)]	B227529	100	100	04/05/19
19D0106-04 [MW-3]	B227529	100	100	04/05/19

**SM19-22 4500-N Org B,C-NH3 C**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
19D0106-01 [V-103 (MW)]	B227312	25.0	25.0	04/03/19
19D0106-02 [V-106 (MW)]	B227312	25.0	25.0	04/03/19
19D0106-03 [V-104 (MW)]	B227312	25.0	25.0	04/03/19



**Sample Extraction Data**

**SM19-22 4500-N Org B,C-NH3 C**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
19D0106-04 [MW-3]	B227312	25.0	25.0	04/03/19

**SM19-22 4500-N Org B,C-NH3 C**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
19D0106-02 [V-106 (MW)]	B227705	50.0	50.0	04/08/19
19D0106-03 [V-104 (MW)]	B227705	50.0	50.0	04/08/19
19D0106-04 [MW-3]	B227705	50.0	50.0	04/08/19

**SM19-22 4500-N Org B,C-NH3 C**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
19D0106-01 [V-103 (MW)]	B227750	50.0	50.0	04/09/19

**Prep Method: SW-846 3005A-SW-846 6020B**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
19D0106-01 [V-103 (MW)]	B227554	50.0	50.0	04/05/19
19D0106-02 [V-106 (MW)]	B227554	50.0	50.0	04/05/19
19D0106-03 [V-104 (MW)]	B227554	50.0	50.0	04/05/19
19D0106-04 [MW-3]	B227554	50.0	50.0	04/05/19

**Prep Method: SW-846 3005A Dissolved-SW-846 6020B**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
19D0106-01 [V-103 (MW)]	B227576	10.0	10.0	04/05/19
19D0106-02 [V-106 (MW)]	B227576	10.0	10.0	04/05/19
19D0106-03 [V-104 (MW)]	B227576	10.0	10.0	04/05/19
19D0106-04 [MW-3]	B227576	10.0	10.0	04/05/19

**Prep Method: SW-846 7470A Prep-SW-846 7470A**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
19D0106-01 [V-103 (MW)]	B227561	6.00	6.00	04/08/19
19D0106-02 [V-106 (MW)]	B227561	6.00	6.00	04/08/19
19D0106-03 [V-104 (MW)]	B227561	6.00	6.00	04/08/19
19D0106-04 [MW-3]	B227561	6.00	6.00	04/08/19

**Prep Method: SW-846 3510C-SW-846 8082A**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
19D0106-01 [V-103 (MW)]	B227544	120	2.00	04/05/19
19D0106-02 [V-106 (MW)]	B227544	215	2.50	04/05/19
19D0106-03 [V-104 (MW)]	B227544	235	2.50	04/05/19
19D0106-04 [MW-3]	B227544	270	2.50	04/05/19

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

**Sample Extraction Data**

**Prep Method: SW-846 5030B-SW-846 8260C**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
19D0106-01 [V-103 (MW)]	B227205	5	5.00	04/03/19

**Prep Method: SW-846 5030B-SW-846 8260C**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
19D0106-02 [V-106 (MW)]	B227208	5	5.00	04/04/19
19D0106-03 [V-104 (MW)]	B227208	5	5.00	04/04/19
19D0106-04 [MW-3]	B227208	5	5.00	04/04/19

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

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
19D0106-01 [V-103 (MW)]	B227443	1020	1.00	04/04/19
19D0106-02 [V-106 (MW)]	B227443	820	1.00	04/04/19
19D0106-03 [V-104 (MW)]	B227443	910	1.00	04/04/19
19D0106-04 [MW-3]	B227443	940	1.00	04/04/19

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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
<b>Batch B227205 - SW-846 5030B</b>										
<b>Blank (B227205-BLK1)</b>										
Prepared: 04/02/19 Analyzed: 04/03/19										
Acetone	ND	10	µg/L							R-05
tert-Amyl Methyl Ether (TAME)	ND	0.50	µg/L							
Benzene	ND	1.0	µg/L							
Bromobenzene	ND	1.0	µg/L							
Bromochloromethane	ND	1.0	µg/L							
Bromodichloromethane	ND	1.0	µg/L							
Bromoform	ND	1.0	µg/L							
Bromomethane	ND	2.0	µg/L							
2-Butanone (MEK)	ND	10	µg/L							
n-Butylbenzene	ND	1.0	µg/L							
sec-Butylbenzene	ND	1.0	µg/L							
tert-Butylbenzene	ND	1.0	µg/L							
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	µg/L							
Carbon Disulfide	ND	5.0	µg/L							
Carbon Tetrachloride	ND	1.0	µg/L							
Chlorobenzene	ND	1.0	µg/L							
Chlorodibromomethane	ND	0.50	µg/L							
Chloroethane	ND	2.0	µg/L							
Chloroform	ND	2.0	µg/L							
Chloromethane	ND	2.0	µg/L							
2-Chlorotoluene	ND	1.0	µg/L							
4-Chlorotoluene	ND	1.0	µg/L							
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	µg/L							
1,2-Dibromoethane (EDB)	ND	0.50	µg/L							
Dibromomethane	ND	1.0	µg/L							
1,2-Dichlorobenzene	ND	1.0	µg/L							
1,3-Dichlorobenzene	ND	1.0	µg/L							
1,4-Dichlorobenzene	ND	1.0	µg/L							
Dichlorodifluoromethane (Freon 12)	ND	2.0	µg/L							
1,1-Dichloroethane	ND	1.0	µg/L							
1,2-Dichloroethane	ND	1.0	µg/L							
1,1-Dichloroethylene	ND	1.0	µg/L							
cis-1,2-Dichloroethylene	ND	1.0	µg/L							
trans-1,2-Dichloroethylene	ND	1.0	µg/L							
1,2-Dichloropropane	ND	1.0	µg/L							
1,3-Dichloropropane	ND	0.50	µg/L							
2,2-Dichloropropane	ND	1.0	µg/L							
1,1-Dichloropropene	ND	0.50	µg/L							
cis-1,3-Dichloropropene	ND	0.40	µg/L							
trans-1,3-Dichloropropene	ND	0.40	µg/L							
Diethyl Ether	ND	2.0	µg/L							
Diisopropyl Ether (DIPE)	ND	0.50	µg/L							
1,4-Dioxane	ND	50	µg/L							V-16
Ethylbenzene	ND	1.0	µg/L							
Hexachlorobutadiene	ND	0.60	µg/L							
2-Hexanone (MBK)	ND	10	µg/L							
Isopropylbenzene (Cumene)	ND	1.0	µg/L							
p-Isopropyltoluene (p-Cymene)	ND	1.0	µg/L							
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L							
Methylene Chloride	ND	5.0	µg/L							
4-Methyl-2-pentanone (MIBK)	ND	10	µg/L							
Naphthalene	ND	2.0	µg/L							

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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 B227205 - SW-846 5030B**

**Blank (B227205-BLK1)**

Prepared: 04/02/19 Analyzed: 04/03/19

n-Propylbenzene	ND	1.0	µg/L							
Styrene	ND	1.0	µg/L							
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L							
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L							
Tetrachloroethylene	ND	1.0	µg/L							
Tetrahydrofuran	ND	2.0	µg/L							
Toluene	ND	1.0	µg/L							
1,2,3-Trichlorobenzene	ND	2.0	µg/L							
1,2,4-Trichlorobenzene	ND	1.0	µg/L							
1,1,1-Trichloroethane	ND	1.0	µg/L							
1,1,2-Trichloroethane	ND	1.0	µg/L							
Trichloroethylene	ND	1.0	µg/L							
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L							
1,2,3-Trichloropropane	ND	2.0	µg/L							
1,2,4-Trimethylbenzene	ND	1.0	µg/L							
1,3,5-Trimethylbenzene	ND	1.0	µg/L							
Vinyl Chloride	ND	2.0	µg/L							
m+p Xylene	ND	2.0	µg/L							
o-Xylene	ND	1.0	µg/L							
Surrogate: 1,2-Dichloroethane-d4	22.0		µg/L	25.0		87.8	70-130			
Surrogate: Toluene-d8	24.6		µg/L	25.0		98.5	70-130			
Surrogate: 4-Bromofluorobenzene	24.6		µg/L	25.0		98.4	70-130			

**LCS (B227205-BS1)**

Prepared: 04/02/19 Analyzed: 04/03/19

Acetone	148	10	µg/L	100		148	40-160			L-14, R-05 †
tert-Amyl Methyl Ether (TAME)	9.79	0.50	µg/L	10.0		97.9	70-130			
Benzene	9.61	1.0	µg/L	10.0		96.1	70-130			
Bromobenzene	11.9	1.0	µg/L	10.0		119	70-130			
Bromochloromethane	10.1	1.0	µg/L	10.0		101	70-130			
Bromodichloromethane	10.4	1.0	µg/L	10.0		104	70-130			
Bromoform	12.3	1.0	µg/L	10.0		123	70-130			
Bromomethane	7.28	2.0	µg/L	10.0		72.8	40-160			†
2-Butanone (MEK)	92.0	10	µg/L	100		92.0	40-160			†
n-Butylbenzene	11.0	1.0	µg/L	10.0		110	70-130			
sec-Butylbenzene	11.2	1.0	µg/L	10.0		112	70-130			
tert-Butylbenzene	11.0	1.0	µg/L	10.0		110	70-130			
tert-Butyl Ethyl Ether (TBEE)	10.1	0.50	µg/L	10.0		101	70-130			
Carbon Disulfide	12.1	5.0	µg/L	10.0		121	70-130			
Carbon Tetrachloride	9.40	1.0	µg/L	10.0		94.0	70-130			
Chlorobenzene	12.4	1.0	µg/L	10.0		124	70-130			
Chlorodibromomethane	11.6	0.50	µg/L	10.0		116	70-130			
Chloroethane	11.2	2.0	µg/L	10.0		112	70-130			
Chloroform	9.49	2.0	µg/L	10.0		94.9	70-130			
Chloromethane	7.67	2.0	µg/L	10.0		76.7	40-160			†
2-Chlorotoluene	11.4	1.0	µg/L	10.0		114	70-130			
4-Chlorotoluene	12.2	1.0	µg/L	10.0		122	70-130			
1,2-Dibromo-3-chloropropane (DBCP)	8.73	2.0	µg/L	10.0		87.3	70-130			
1,2-Dibromoethane (EDB)	11.1	0.50	µg/L	10.0		111	70-130			
Dibromomethane	11.0	1.0	µg/L	10.0		110	70-130			
1,2-Dichlorobenzene	12.1	1.0	µg/L	10.0		121	70-130			
1,3-Dichlorobenzene	12.2	1.0	µg/L	10.0		122	70-130			
1,4-Dichlorobenzene	11.9	1.0	µg/L	10.0		119	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
<b>Batch B227205 - SW-846 5030B</b>										
<b>LCS (B227205-BS1)</b>										
					Prepared: 04/02/19 Analyzed: 04/03/19					
Dichlorodifluoromethane (Freon 12)	7.25	2.0	µg/L	10.0		72.5	40-160			†
1,1-Dichloroethane	9.74	1.0	µg/L	10.0		97.4	70-130			
1,2-Dichloroethane	8.80	1.0	µg/L	10.0		88.0	70-130			
1,1-Dichloroethylene	10.8	1.0	µg/L	10.0		108	70-130			
cis-1,2-Dichloroethylene	9.70	1.0	µg/L	10.0		97.0	70-130			
trans-1,2-Dichloroethylene	10.0	1.0	µg/L	10.0		100	70-130			
1,2-Dichloropropane	9.97	1.0	µg/L	10.0		99.7	70-130			
1,3-Dichloropropane	10.6	0.50	µg/L	10.0		106	70-130			
2,2-Dichloropropane	9.60	1.0	µg/L	10.0		96.0	70-130			
1,1-Dichloropropene	8.97	0.50	µg/L	10.0		89.7	70-130			
cis-1,3-Dichloropropene	11.5	0.40	µg/L	10.0		115	70-130			
trans-1,3-Dichloropropene	11.7	0.40	µg/L	10.0		117	70-130			
Diethyl Ether	13.0	2.0	µg/L	10.0		130	70-130			
Diisopropyl Ether (DIPE)	10.0	0.50	µg/L	10.0		100	70-130			
1,4-Dioxane	92.3	50	µg/L	100		92.3	40-160			V-16 †
Ethylbenzene	11.5	1.0	µg/L	10.0		115	70-130			
Hexachlorobutadiene	12.6	0.60	µg/L	10.0		126	70-130			
2-Hexanone (MBK)	104	10	µg/L	100		104	40-160			†
Isopropylbenzene (Cumene)	11.8	1.0	µg/L	10.0		118	70-130			
p-Isopropyltoluene (p-Cymene)	11.4	1.0	µg/L	10.0		114	70-130			
Methyl tert-Butyl Ether (MTBE)	10.8	1.0	µg/L	10.0		108	70-130			
Methylene Chloride	11.5	5.0	µg/L	10.0		115	70-130			
4-Methyl-2-pentanone (MIBK)	101	10	µg/L	100		101	40-160			†
Naphthalene	9.77	2.0	µg/L	10.0		97.7	70-130			
n-Propylbenzene	11.6	1.0	µg/L	10.0		116	70-130			
Styrene	12.9	1.0	µg/L	10.0		129	70-130			V-20
1,1,1,2-Tetrachloroethane	12.6	1.0	µg/L	10.0		126	70-130			
1,1,1,2,2-Tetrachloroethane	13.0	0.50	µg/L	10.0		130	70-130			
Tetrachloroethylene	10.9	1.0	µg/L	10.0		109	70-130			
Tetrahydrofuran	10.7	2.0	µg/L	10.0		107	70-130			
Toluene	10.4	1.0	µg/L	10.0		104	70-130			
1,2,3-Trichlorobenzene	10.9	2.0	µg/L	10.0		109	70-130			
1,2,4-Trichlorobenzene	10.4	1.0	µg/L	10.0		104	70-130			
1,1,1-Trichloroethane	9.10	1.0	µg/L	10.0		91.0	70-130			
1,1,2-Trichloroethane	11.4	1.0	µg/L	10.0		114	70-130			
Trichloroethylene	10.4	1.0	µg/L	10.0		104	70-130			
Trichlorofluoromethane (Freon 11)	9.44	2.0	µg/L	10.0		94.4	70-130			
1,2,3-Trichloropropane	11.5	2.0	µg/L	10.0		115	70-130			
1,2,4-Trimethylbenzene	11.3	1.0	µg/L	10.0		113	70-130			
1,3,5-Trimethylbenzene	11.8	1.0	µg/L	10.0		118	70-130			
Vinyl Chloride	11.7	2.0	µg/L	10.0		117	70-130			
m+p Xylene	23.4	2.0	µg/L	20.0		117	70-130			
o-Xylene	12.2	1.0	µg/L	10.0		122	70-130			
Surrogate: 1,2-Dichloroethane-d4	21.9		µg/L	25.0		87.6	70-130			
Surrogate: Toluene-d8	24.4		µg/L	25.0		97.7	70-130			
Surrogate: 4-Bromofluorobenzene	26.1		µg/L	25.0		104	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 B227205 - SW-846 5030B

LCS Dup (B227205-BSD1)

Prepared: 04/02/19 Analyzed: 04/03/19

Acetone	109	10	µg/L	100		109	40-160	29.9 *	20	R-05 †
tert-Amyl Methyl Ether (TAME)	9.12	0.50	µg/L	10.0		91.2	70-130	7.09	20	
Benzene	9.57	1.0	µg/L	10.0		95.7	70-130	0.417	20	
Bromobenzene	11.4	1.0	µg/L	10.0		114	70-130	3.86	20	
Bromochloromethane	10.0	1.0	µg/L	10.0		100	70-130	0.199	20	
Bromodichloromethane	10.4	1.0	µg/L	10.0		104	70-130	0.577	20	
Bromoform	12.0	1.0	µg/L	10.0		120	70-130	2.47	20	
Bromomethane	7.86	2.0	µg/L	10.0		78.6	40-160	7.66	20	†
2-Butanone (MEK)	81.2	10	µg/L	100		81.2	40-160	12.5	20	†
n-Butylbenzene	10.9	1.0	µg/L	10.0		109	70-130	0.912	20	
sec-Butylbenzene	11.4	1.0	µg/L	10.0		114	70-130	1.06	20	
tert-Butylbenzene	11.1	1.0	µg/L	10.0		111	70-130	0.725	20	
tert-Butyl Ethyl Ether (TBEE)	9.46	0.50	µg/L	10.0		94.6	70-130	6.35	20	
Carbon Disulfide	11.9	5.0	µg/L	10.0		119	70-130	1.67	20	
Carbon Tetrachloride	9.35	1.0	µg/L	10.0		93.5	70-130	0.533	20	
Chlorobenzene	12.2	1.0	µg/L	10.0		122	70-130	1.30	20	
Chlorodibromomethane	11.4	0.50	µg/L	10.0		114	70-130	1.91	20	
Chloroethane	10.6	2.0	µg/L	10.0		106	70-130	5.71	20	
Chloroform	9.51	2.0	µg/L	10.0		95.1	70-130	0.211	20	
Chloromethane	7.64	2.0	µg/L	10.0		76.4	40-160	0.392	20	†
2-Chlorotoluene	11.1	1.0	µg/L	10.0		111	70-130	1.87	20	
4-Chlorotoluene	11.9	1.0	µg/L	10.0		119	70-130	2.99	20	
1,2-Dibromo-3-chloropropane (DBCP)	8.02	2.0	µg/L	10.0		80.2	70-130	8.48	20	
1,2-Dibromoethane (EDB)	10.9	0.50	µg/L	10.0		109	70-130	1.91	20	
Dibromomethane	10.8	1.0	µg/L	10.0		108	70-130	1.66	20	
1,2-Dichlorobenzene	12.0	1.0	µg/L	10.0		120	70-130	0.747	20	
1,3-Dichlorobenzene	11.9	1.0	µg/L	10.0		119	70-130	2.57	20	
1,4-Dichlorobenzene	11.7	1.0	µg/L	10.0		117	70-130	1.70	20	
Dichlorodifluoromethane (Freon 12)	7.42	2.0	µg/L	10.0		74.2	40-160	2.32	20	†
1,1-Dichloroethane	9.62	1.0	µg/L	10.0		96.2	70-130	1.24	20	
1,2-Dichloroethane	8.60	1.0	µg/L	10.0		86.0	70-130	2.30	20	
1,1-Dichloroethylene	10.8	1.0	µg/L	10.0		108	70-130	0.834	20	
cis-1,2-Dichloroethylene	9.74	1.0	µg/L	10.0		97.4	70-130	0.412	20	
trans-1,2-Dichloroethylene	9.98	1.0	µg/L	10.0		99.8	70-130	0.400	20	
1,2-Dichloropropane	9.47	1.0	µg/L	10.0		94.7	70-130	5.14	20	
1,3-Dichloropropane	10.4	0.50	µg/L	10.0		104	70-130	1.14	20	
2,2-Dichloropropane	9.59	1.0	µg/L	10.0		95.9	70-130	0.104	20	
1,1-Dichloropropene	8.94	0.50	µg/L	10.0		89.4	70-130	0.335	20	
cis-1,3-Dichloropropene	11.2	0.40	µg/L	10.0		112	70-130	1.94	20	
trans-1,3-Dichloropropene	11.8	0.40	µg/L	10.0		118	70-130	0.594	20	
Diethyl Ether	12.7	2.0	µg/L	10.0		127	70-130	2.10	20	
Diisopropyl Ether (DIPE)	9.65	0.50	µg/L	10.0		96.5	70-130	3.66	20	
1,4-Dioxane	95.5	50	µg/L	100		95.5	40-160	3.47	20	V-16 †
Ethylbenzene	11.2	1.0	µg/L	10.0		112	70-130	2.46	20	
Hexachlorobutadiene	12.4	0.60	µg/L	10.0		124	70-130	1.28	20	
2-Hexanone (MBK)	93.6	10	µg/L	100		93.6	40-160	10.4	20	†
Isopropylbenzene (Cumene)	11.6	1.0	µg/L	10.0		116	70-130	1.28	20	
p-Isopropyltoluene (p-Cymene)	11.2	1.0	µg/L	10.0		112	70-130	1.68	20	
Methyl tert-Butyl Ether (MTBE)	10.3	1.0	µg/L	10.0		103	70-130	5.12	20	
Methylene Chloride	11.5	5.0	µg/L	10.0		115	70-130	0.174	20	
4-Methyl-2-pentanone (MIBK)	94.2	10	µg/L	100		94.2	40-160	6.57	20	†
Naphthalene	9.14	2.0	µg/L	10.0		91.4	70-130	6.66	20	

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

**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 B227205 - SW-846 5030B**

**LCS Dup (B227205-BSD1)**

Prepared: 04/02/19 Analyzed: 04/03/19

n-Propylbenzene	11.4	1.0	µg/L	10.0		114	70-130	1.92	20	
Styrene	12.9	1.0	µg/L	10.0		129	70-130	0.0775	20	V-20
1,1,1,2-Tetrachloroethane	12.3	1.0	µg/L	10.0		123	70-130	2.97	20	
1,1,2,2-Tetrachloroethane	12.1	0.50	µg/L	10.0		121	70-130	7.73	20	
Tetrachloroethylene	10.7	1.0	µg/L	10.0		107	70-130	1.75	20	
Tetrahydrofuran	9.26	2.0	µg/L	10.0		92.6	70-130	14.3	20	
Toluene	10.3	1.0	µg/L	10.0		103	70-130	0.677	20	
1,2,3-Trichlorobenzene	10.5	2.0	µg/L	10.0		105	70-130	3.82	20	
1,2,4-Trichlorobenzene	9.88	1.0	µg/L	10.0		98.8	70-130	5.51	20	
1,1,1-Trichloroethane	9.00	1.0	µg/L	10.0		90.0	70-130	1.10	20	
1,1,2-Trichloroethane	11.4	1.0	µg/L	10.0		114	70-130	0.00	20	
Trichloroethylene	9.95	1.0	µg/L	10.0		99.5	70-130	4.04	20	
Trichlorofluoromethane (Freon 11)	9.27	2.0	µg/L	10.0		92.7	70-130	1.82	20	
1,2,3-Trichloropropane	11.1	2.0	µg/L	10.0		111	70-130	4.07	20	
1,2,4-Trimethylbenzene	11.1	1.0	µg/L	10.0		111	70-130	1.79	20	
1,3,5-Trimethylbenzene	11.4	1.0	µg/L	10.0		114	70-130	3.18	20	
Vinyl Chloride	12.5	2.0	µg/L	10.0		125	70-130	6.70	20	
m+p Xylene	22.9	2.0	µg/L	20.0		114	70-130	2.20	20	
o-Xylene	12.0	1.0	µg/L	10.0		120	70-130	1.82	20	
Surrogate: 1,2-Dichloroethane-d4	22.2		µg/L	25.0		89.0	70-130			
Surrogate: Toluene-d8	24.8		µg/L	25.0		99.4	70-130			
Surrogate: 4-Bromofluorobenzene	25.8		µg/L	25.0		103	70-130			

**Batch B227208 - SW-846 5030B**

**Blank (B227208-BLK1)**

Prepared: 04/02/19 Analyzed: 04/05/19

Acetone	ND	10	µg/L							R-05
tert-Amyl Methyl Ether (TAME)	ND	0.50	µg/L							
Benzene	ND	1.0	µg/L							
Bromobenzene	ND	1.0	µg/L							
Bromochloromethane	ND	1.0	µg/L							
Bromodichloromethane	ND	1.0	µg/L							
Bromoform	ND	1.0	µg/L							
Bromomethane	ND	2.0	µg/L							
2-Butanone (MEK)	ND	10	µg/L							V-05
n-Butylbenzene	ND	1.0	µg/L							
sec-Butylbenzene	ND	1.0	µg/L							
tert-Butylbenzene	ND	1.0	µg/L							
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	µg/L							
Carbon Disulfide	ND	5.0	µg/L							
Carbon Tetrachloride	ND	1.0	µg/L							
Chlorobenzene	ND	1.0	µg/L							
Chlorodibromomethane	ND	0.50	µg/L							
Chloroethane	ND	2.0	µg/L							
Chloroform	ND	2.0	µg/L							
Chloromethane	ND	2.0	µg/L							
2-Chlorotoluene	ND	1.0	µg/L							
4-Chlorotoluene	ND	1.0	µg/L							
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	µg/L							
1,2-Dibromoethane (EDB)	ND	0.50	µg/L							
Dibromomethane	ND	1.0	µg/L							
1,2-Dichlorobenzene	ND	1.0	µg/L							
1,3-Dichlorobenzene	ND	1.0	µg/L							

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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
<b>Batch B227208 - SW-846 5030B</b>										
<b>Blank (B227208-BLK1)</b>										
					Prepared: 04/02/19 Analyzed: 04/05/19					
1,4-Dichlorobenzene	ND	1.0	µg/L							
Dichlorodifluoromethane (Freon 12)	ND	2.0	µg/L							
1,1-Dichloroethane	ND	1.0	µg/L							
1,2-Dichloroethane	ND	1.0	µg/L							
1,1-Dichloroethylene	ND	1.0	µg/L							
cis-1,2-Dichloroethylene	ND	1.0	µg/L							
trans-1,2-Dichloroethylene	ND	1.0	µg/L							
1,2-Dichloropropane	ND	1.0	µg/L							
1,3-Dichloropropane	ND	0.50	µg/L							
2,2-Dichloropropane	ND	1.0	µg/L							V-05
1,1-Dichloropropene	ND	0.50	µg/L							
cis-1,3-Dichloropropene	ND	0.40	µg/L							
trans-1,3-Dichloropropene	ND	0.40	µg/L							
Diethyl Ether	ND	2.0	µg/L							
Diisopropyl Ether (DIPE)	ND	0.50	µg/L							
1,4-Dioxane	ND	50	µg/L							V-16
Ethylbenzene	ND	1.0	µg/L							
Hexachlorobutadiene	ND	0.60	µg/L							
2-Hexanone (MBK)	ND	10	µg/L							
Isopropylbenzene (Cumene)	ND	1.0	µg/L							
p-Isopropyltoluene (p-Cymene)	ND	1.0	µg/L							
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L							
Methylene Chloride	ND	5.0	µg/L							
4-Methyl-2-pentanone (MIBK)	ND	10	µg/L							
Naphthalene	ND	2.0	µg/L							
n-Propylbenzene	ND	1.0	µg/L							
Styrene	ND	1.0	µg/L							
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L							
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L							R-05
Tetrachloroethylene	ND	1.0	µg/L							
Tetrahydrofuran	ND	2.0	µg/L							
Toluene	ND	1.0	µg/L							
1,2,3-Trichlorobenzene	ND	2.0	µg/L							
1,2,4-Trichlorobenzene	ND	1.0	µg/L							
1,1,1-Trichloroethane	ND	1.0	µg/L							
1,1,2-Trichloroethane	ND	1.0	µg/L							
Trichloroethylene	ND	1.0	µg/L							
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L							
1,2,3-Trichloropropane	ND	2.0	µg/L							
1,2,4-Trimethylbenzene	ND	1.0	µg/L							
1,3,5-Trimethylbenzene	ND	1.0	µg/L							
Vinyl Chloride	ND	2.0	µg/L							
m+p Xylene	ND	2.0	µg/L							
o-Xylene	ND	1.0	µg/L							
Surrogate: 1,2-Dichloroethane-d4	22.9		µg/L	25.0		91.4	70-130			
Surrogate: Toluene-d8	24.4		µg/L	25.0		97.6	70-130			
Surrogate: 4-Bromofluorobenzene	25.6		µg/L	25.0		102	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 B227208 - SW-846 5030B

LCS (B227208-BS1)

Prepared: 04/02/19 Analyzed: 04/05/19

Acetone	118	10	µg/L	100		118	40-160			R-05 †
tert-Amyl Methyl Ether (TAME)	11.6	0.50	µg/L	10.0		116	70-130			
Benzene	9.82	1.0	µg/L	10.0		98.2	70-130			
Bromobenzene	11.8	1.0	µg/L	10.0		118	70-130			
Bromochloromethane	10.4	1.0	µg/L	10.0		104	70-130			
Bromodichloromethane	10.6	1.0	µg/L	10.0		106	70-130			
Bromoform	11.6	1.0	µg/L	10.0		116	70-130			
Bromomethane	7.42	2.0	µg/L	10.0		74.2	40-160			†
2-Butanone (MEK)	80.1	10	µg/L	100		80.1	40-160			V-05 †
n-Butylbenzene	11.4	1.0	µg/L	10.0		114	70-130			
sec-Butylbenzene	11.5	1.0	µg/L	10.0		115	70-130			
tert-Butylbenzene	11.4	1.0	µg/L	10.0		114	70-130			
tert-Butyl Ethyl Ether (TBEE)	11.6	0.50	µg/L	10.0		116	70-130			
Carbon Disulfide	12.8	5.0	µg/L	10.0		128	70-130			
Carbon Tetrachloride	9.98	1.0	µg/L	10.0		99.8	70-130			
Chlorobenzene	12.0	1.0	µg/L	10.0		120	70-130			
Chlorodibromomethane	12.1	0.50	µg/L	10.0		121	70-130			
Chloroethane	11.3	2.0	µg/L	10.0		113	70-130			
Chloroform	10.0	2.0	µg/L	10.0		100	70-130			
Chloromethane	8.27	2.0	µg/L	10.0		82.7	40-160			†
2-Chlorotoluene	11.3	1.0	µg/L	10.0		113	70-130			
4-Chlorotoluene	12.5	1.0	µg/L	10.0		125	70-130			
1,2-Dibromo-3-chloropropane (DBCP)	8.33	2.0	µg/L	10.0		83.3	70-130			
1,2-Dibromoethane (EDB)	11.2	0.50	µg/L	10.0		112	70-130			
Dibromomethane	11.2	1.0	µg/L	10.0		112	70-130			
1,2-Dichlorobenzene	12.2	1.0	µg/L	10.0		122	70-130			
1,3-Dichlorobenzene	11.9	1.0	µg/L	10.0		119	70-130			
1,4-Dichlorobenzene	11.5	1.0	µg/L	10.0		115	70-130			
Dichlorodifluoromethane (Freon 12)	7.30	2.0	µg/L	10.0		73.0	40-160			†
1,1-Dichloroethane	10.2	1.0	µg/L	10.0		102	70-130			
1,2-Dichloroethane	9.32	1.0	µg/L	10.0		93.2	70-130			
1,1-Dichloroethylene	12.0	1.0	µg/L	10.0		120	70-130			
cis-1,2-Dichloroethylene	10.3	1.0	µg/L	10.0		103	70-130			
trans-1,2-Dichloroethylene	10.8	1.0	µg/L	10.0		108	70-130			
1,2-Dichloropropane	10.0	1.0	µg/L	10.0		100	70-130			
1,3-Dichloropropane	10.7	0.50	µg/L	10.0		107	70-130			
2,2-Dichloropropane	7.49	1.0	µg/L	10.0		74.9	70-130			V-05
1,1-Dichloropropene	9.62	0.50	µg/L	10.0		96.2	70-130			
cis-1,3-Dichloropropene	11.4	0.40	µg/L	10.0		114	70-130			
trans-1,3-Dichloropropene	11.9	0.40	µg/L	10.0		119	70-130			
<b>Diethyl Ether</b>	14.1	2.0	µg/L	10.0		<b>141</b>	* 70-130			V-20, L-02
Diisopropyl Ether (DIPE)	10.7	0.50	µg/L	10.0		107	70-130			
1,4-Dioxane	83.2	50	µg/L	100		83.2	40-160			V-16 †
Ethylbenzene	11.4	1.0	µg/L	10.0		114	70-130			
Hexachlorobutadiene	12.0	0.60	µg/L	10.0		120	70-130			
2-Hexanone (MBK)	93.4	10	µg/L	100		93.4	40-160			†
Isopropylbenzene (Cumene)	11.8	1.0	µg/L	10.0		118	70-130			
p-Isopropyltoluene (p-Cymene)	11.5	1.0	µg/L	10.0		115	70-130			
Methyl tert-Butyl Ether (MTBE)	11.9	1.0	µg/L	10.0		119	70-130			
Methylene Chloride	12.7	5.0	µg/L	10.0		127	70-130			
4-Methyl-2-pentanone (MIBK)	96.0	10	µg/L	100		96.0	40-160			†
Naphthalene	9.97	2.0	µg/L	10.0		99.7	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
<b>Batch B227208 - SW-846 5030B</b>										
<b>LCS (B227208-BS1)</b>										
					Prepared: 04/02/19 Analyzed: 04/05/19					
n-Propylbenzene	11.9	1.0	µg/L	10.0		119	70-130			
Styrene	13.0	1.0	µg/L	10.0		130	70-130			V-20
1,1,1,2-Tetrachloroethane	12.5	1.0	µg/L	10.0		125	70-130			
1,1,2,2-Tetrachloroethane	11.3	0.50	µg/L	10.0		113	70-130			R-05
Tetrachloroethylene	10.6	1.0	µg/L	10.0		106	70-130			
Tetrahydrofuran	10.0	2.0	µg/L	10.0		100	70-130			
Toluene	10.5	1.0	µg/L	10.0		105	70-130			
1,2,3-Trichlorobenzene	10.7	2.0	µg/L	10.0		107	70-130			
1,2,4-Trichlorobenzene	10.3	1.0	µg/L	10.0		103	70-130			
1,1,1-Trichloroethane	9.84	1.0	µg/L	10.0		98.4	70-130			
1,1,2-Trichloroethane	11.4	1.0	µg/L	10.0		114	70-130			
Trichloroethylene	10.4	1.0	µg/L	10.0		104	70-130			
Trichlorofluoromethane (Freon 11)	10.1	2.0	µg/L	10.0		101	70-130			
1,2,3-Trichloropropane	10.6	2.0	µg/L	10.0		106	70-130			
1,2,4-Trimethylbenzene	11.5	1.0	µg/L	10.0		115	70-130			
1,3,5-Trimethylbenzene	11.9	1.0	µg/L	10.0		119	70-130			
<b>Vinyl Chloride</b>	21.0	2.0	µg/L	10.0		<b>210</b> *	70-130			L-02, V-20
m+p Xylene	23.3	2.0	µg/L	20.0		116	70-130			
o-Xylene	12.1	1.0	µg/L	10.0		121	70-130			
Surrogate: 1,2-Dichloroethane-d4	23.4		µg/L	25.0		93.6	70-130			
Surrogate: Toluene-d8	24.7		µg/L	25.0		98.8	70-130			
Surrogate: 4-Bromofluorobenzene	26.4		µg/L	25.0		106	70-130			
<b>LCS Dup (B227208-BSD1)</b>										
					Prepared: 04/02/19 Analyzed: 04/05/19					
Acetone	157	10	µg/L	100		157	40-160	<b>28.5</b> *	20	L-14, R-05 †
tert-Amyl Methyl Ether (TAME)	11.4	0.50	µg/L	10.0		114	70-130	1.91	20	
Benzene	9.53	1.0	µg/L	10.0		95.3	70-130	3.00	20	
Bromobenzene	11.4	1.0	µg/L	10.0		114	70-130	3.61	20	
Bromochloromethane	10.3	1.0	µg/L	10.0		103	70-130	0.483	20	
Bromodichloromethane	10.3	1.0	µg/L	10.0		103	70-130	2.77	20	
Bromoform	11.6	1.0	µg/L	10.0		116	70-130	0.430	20	
Bromomethane	8.05	2.0	µg/L	10.0		80.5	40-160	8.14	20	†
2-Butanone (MEK)	87.8	10	µg/L	100		87.8	40-160	9.08	20	V-05 †
n-Butylbenzene	10.8	1.0	µg/L	10.0		108	70-130	5.51	20	
sec-Butylbenzene	11.2	1.0	µg/L	10.0		112	70-130	2.73	20	
tert-Butylbenzene	10.9	1.0	µg/L	10.0		109	70-130	4.49	20	
tert-Butyl Ethyl Ether (TBEE)	11.6	0.50	µg/L	10.0		116	70-130	0.345	20	
Carbon Disulfide	12.1	5.0	µg/L	10.0		121	70-130	5.06	20	
Carbon Tetrachloride	9.66	1.0	µg/L	10.0		96.6	70-130	3.26	20	
Chlorobenzene	11.6	1.0	µg/L	10.0		116	70-130	3.90	20	
Chlorodibromomethane	11.7	0.50	µg/L	10.0		117	70-130	3.27	20	
Chloroethane	11.6	2.0	µg/L	10.0		116	70-130	2.88	20	
Chloroform	9.79	2.0	µg/L	10.0		97.9	70-130	2.32	20	
Chloromethane	7.95	2.0	µg/L	10.0		79.5	40-160	3.95	20	†
2-Chlorotoluene	10.7	1.0	µg/L	10.0		107	70-130	5.65	20	
4-Chlorotoluene	11.7	1.0	µg/L	10.0		117	70-130	6.35	20	
1,2-Dibromo-3-chloropropane (DBCP)	8.22	2.0	µg/L	10.0		82.2	70-130	1.33	20	
1,2-Dibromoethane (EDB)	11.1	0.50	µg/L	10.0		111	70-130	1.17	20	
Dibromomethane	11.0	1.0	µg/L	10.0		110	70-130	1.98	20	
1,2-Dichlorobenzene	11.8	1.0	µg/L	10.0		118	70-130	3.26	20	
1,3-Dichlorobenzene	11.6	1.0	µg/L	10.0		116	70-130	2.30	20	
1,4-Dichlorobenzene	11.3	1.0	µg/L	10.0		113	70-130	1.76	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
<b>Batch B227208 - SW-846 5030B</b>										
<b>LCS Dup (B227208-BSD1)</b>										
					Prepared: 04/02/19 Analyzed: 04/05/19					
Dichlorodifluoromethane (Freon 12)	6.91	2.0	µg/L	10.0		69.1	40-160	5.49	20	L-14 †
1,1-Dichloroethane	10.0	1.0	µg/L	10.0		100	70-130	1.49	20	
1,2-Dichloroethane	9.07	1.0	µg/L	10.0		90.7	70-130	2.72	20	
1,1-Dichloroethylene	11.7	1.0	µg/L	10.0		117	70-130	2.19	20	
cis-1,2-Dichloroethylene	9.90	1.0	µg/L	10.0		99.0	70-130	3.86	20	
trans-1,2-Dichloroethylene	10.4	1.0	µg/L	10.0		104	70-130	4.34	20	
1,2-Dichloropropane	9.62	1.0	µg/L	10.0		96.2	70-130	3.87	20	
1,3-Dichloropropane	10.8	0.50	µg/L	10.0		108	70-130	0.746	20	
2,2-Dichloropropane	7.20	1.0	µg/L	10.0		72.0	70-130	3.95	20	V-05
1,1-Dichloropropene	9.46	0.50	µg/L	10.0		94.6	70-130	1.68	20	
cis-1,3-Dichloropropene	10.9	0.40	µg/L	10.0		109	70-130	4.93	20	
trans-1,3-Dichloropropene	11.6	0.40	µg/L	10.0		116	70-130	2.39	20	
<b>Diethyl Ether</b>	14.2	2.0	µg/L	10.0		<b>142</b> *	70-130	0.988	20	V-20, L-02
Diisopropyl Ether (DIPE)	10.3	0.50	µg/L	10.0		103	70-130	3.24	20	
1,4-Dioxane	88.1	50	µg/L	100		88.1	40-160	5.75	20	V-16 †
Ethylbenzene	11.0	1.0	µg/L	10.0		110	70-130	3.75	20	
Hexachlorobutadiene	11.6	0.60	µg/L	10.0		116	70-130	2.88	20	
2-Hexanone (MBK)	97.9	10	µg/L	100		97.9	40-160	4.69	20	†
Isopropylbenzene (Cumene)	11.3	1.0	µg/L	10.0		113	70-130	4.59	20	
p-Isopropyltoluene (p-Cymene)	11.0	1.0	µg/L	10.0		110	70-130	4.53	20	
Methyl tert-Butyl Ether (MTBE)	11.8	1.0	µg/L	10.0		118	70-130	1.01	20	
Methylene Chloride	12.6	5.0	µg/L	10.0		126	70-130	0.793	20	
4-Methyl-2-pentanone (MIBK)	93.9	10	µg/L	100		93.9	40-160	2.31	20	†
Naphthalene	9.57	2.0	µg/L	10.0		95.7	70-130	4.09	20	
n-Propylbenzene	11.3	1.0	µg/L	10.0		113	70-130	5.17	20	
Styrene	12.7	1.0	µg/L	10.0		127	70-130	2.65	20	V-20
1,1,1,2-Tetrachloroethane	12.2	1.0	µg/L	10.0		122	70-130	2.35	20	
1,1,2,2-Tetrachloroethane	9.07	0.50	µg/L	10.0		90.7	70-130	<b>21.8</b> *	20	R-05
Tetrachloroethylene	10.4	1.0	µg/L	10.0		104	70-130	2.67	20	
Tetrahydrofuran	9.86	2.0	µg/L	10.0		98.6	70-130	1.51	20	
Toluene	10.3	1.0	µg/L	10.0		103	70-130	1.54	20	
1,2,3-Trichlorobenzene	10.4	2.0	µg/L	10.0		104	70-130	2.74	20	
1,2,4-Trichlorobenzene	10.1	1.0	µg/L	10.0		101	70-130	1.96	20	
1,1,1-Trichloroethane	9.57	1.0	µg/L	10.0		95.7	70-130	2.78	20	
1,1,2-Trichloroethane	11.4	1.0	µg/L	10.0		114	70-130	0.350	20	
Trichloroethylene	12.1	1.0	µg/L	10.0		121	70-130	15.4	20	
Trichlorofluoromethane (Freon 11)	9.67	2.0	µg/L	10.0		96.7	70-130	4.65	20	
1,2,3-Trichloropropane	10.4	2.0	µg/L	10.0		104	70-130	2.48	20	
1,2,4-Trimethylbenzene	11.1	1.0	µg/L	10.0		111	70-130	4.25	20	
1,3,5-Trimethylbenzene	11.3	1.0	µg/L	10.0		113	70-130	4.57	20	
<b>Vinyl Chloride</b>	18.6	2.0	µg/L	10.0		<b>186</b> *	70-130	12.5	20	L-02, V-20
m+p Xylene	22.3	2.0	µg/L	20.0		112	70-130	4.30	20	
o-Xylene	11.6	1.0	µg/L	10.0		116	70-130	4.04	20	
Surrogate: 1,2-Dichloroethane-d4	23.2		µg/L	25.0		92.8	70-130			
Surrogate: Toluene-d8	24.9		µg/L	25.0		99.6	70-130			
Surrogate: 4-Bromofluorobenzene	26.1		µg/L	25.0		104	70-130			

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

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 B227443 - SW-846 3510C

Blank (B227443-BLK1)

Prepared: 04/04/19 Analyzed: 04/05/19

Acenaphthene	ND	5.0	µg/L							
Acenaphthylene	ND	5.0	µg/L							
Acetophenone	ND	10	µg/L							
Aniline	ND	5.0	µg/L							V-34
Anthracene	ND	5.0	µg/L							
Benzo(a)anthracene	ND	5.0	µg/L							
Benzo(a)pyrene	ND	5.0	µg/L							
Benzo(b)fluoranthene	ND	5.0	µg/L							
Benzo(g,h,i)perylene	ND	5.0	µg/L							
Benzo(k)fluoranthene	ND	5.0	µg/L							
Bis(2-chloroethoxy)methane	ND	10	µg/L							
Bis(2-chloroethyl)ether	ND	10	µg/L							
Bis(2-chloroisopropyl)ether	ND	10	µg/L							
Bis(2-Ethylhexyl)phthalate	ND	10	µg/L							
4-Bromophenylphenylether	ND	10	µg/L							
Butylbenzylphthalate	ND	10	µg/L							
4-Chloroaniline	ND	10	µg/L							R-05, V-34
2-Chloronaphthalene	ND	10	µg/L							
2-Chlorophenol	ND	10	µg/L							
Chrysene	ND	5.0	µg/L							
Dibenz(a,h)anthracene	ND	5.0	µg/L							
Dibenzofuran	ND	5.0	µg/L							
Di-n-butylphthalate	ND	10	µg/L							
1,2-Dichlorobenzene	ND	5.0	µg/L							
1,3-Dichlorobenzene	ND	5.0	µg/L							
1,4-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							
2,4-Dinitrophenol	ND	10	µg/L							V-05
2,4-Dinitrotoluene	ND	10	µg/L							
2,6-Dinitrotoluene	ND	10	µg/L							
Di-n-octylphthalate	ND	10	µg/L							
1,2-Diphenylhydrazine/Azobenzene	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							
Hexachloroethane	ND	10	µg/L							
Indeno(1,2,3-cd)pyrene	ND	5.0	µg/L							
Isophorone	ND	10	µg/L							
2-Methylnaphthalene	ND	5.0	µg/L							
2-Methylphenol	ND	10	µg/L							
3/4-Methylphenol	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							
Pentachlorophenol	ND	10	µg/L							
Phenanthrene	ND	5.0	µg/L							

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

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 B227443 - SW-846 3510C

Blank (B227443-BLK1)

Prepared: 04/04/19 Analyzed: 04/05/19

Phenol	ND	10	µg/L							R-05
Pyrene	ND	5.0	µg/L							
1,2,4-Trichlorobenzene	ND	5.0	µg/L							
2,4,5-Trichlorophenol	ND	10	µg/L							
2,4,6-Trichlorophenol	ND	10	µg/L							
Surrogate: 2-Fluorophenol	101		µg/L	200		50.5	15-110			
Surrogate: Phenol-d6	70.6		µg/L	200		35.3	15-110			
Surrogate: Nitrobenzene-d5	75.8		µg/L	100		75.8	30-130			
Surrogate: 2-Fluorobiphenyl	77.1		µg/L	100		77.1	30-130			
Surrogate: 2,4,6-Tribromophenol	164		µg/L	200		82.1	15-110			
Surrogate: p-Terphenyl-d14	92.3		µg/L	100		92.3	30-130			

LCS (B227443-BS1)

Prepared: 04/04/19 Analyzed: 04/05/19

Acenaphthene	39.6	5.0	µg/L	50.0		79.2	40-140			
Acenaphthylene	39.8	5.0	µg/L	50.0		79.5	40-140			
Acetophenone	39.2	10	µg/L	50.0		78.4	40-140			
Aniline	34.8	5.0	µg/L	50.0		69.7	40-140			V-34
Anthracene	41.4	5.0	µg/L	50.0		82.7	40-140			
Benzo(a)anthracene	42.0	5.0	µg/L	50.0		84.0	40-140			
Benzo(a)pyrene	43.9	5.0	µg/L	50.0		87.9	40-140			
Benzo(b)fluoranthene	41.7	5.0	µg/L	50.0		83.3	40-140			
Benzo(g,h,i)perylene	45.6	5.0	µg/L	50.0		91.1	40-140			
Benzo(k)fluoranthene	42.6	5.0	µg/L	50.0		85.2	40-140			
Bis(2-chloroethoxy)methane	45.4	10	µg/L	50.0		90.8	40-140			
Bis(2-chloroethyl)ether	40.9	10	µg/L	50.0		81.9	40-140			
Bis(2-chloroisopropyl)ether	44.0	10	µg/L	50.0		87.9	40-140			
Bis(2-Ethylhexyl)phthalate	39.8	10	µg/L	50.0		79.6	40-140			
4-Bromophenylphenylether	39.4	10	µg/L	50.0		78.7	40-140			
Butylbenzylphthalate	43.7	10	µg/L	50.0		87.4	40-140			
4-Chloroaniline	38.7	10	µg/L	50.0		77.5	15-140			R-05, V-34 †
2-Chloronaphthalene	35.1	10	µg/L	50.0		70.2	40-140			
2-Chlorophenol	39.4	10	µg/L	50.0		78.8	30-130			
Chrysene	42.8	5.0	µg/L	50.0		85.5	40-140			
Dibenz(a,h)anthracene	43.1	5.0	µg/L	50.0		86.1	40-140			
Dibenzofuran	41.7	5.0	µg/L	50.0		83.3	40-140			
Di-n-butylphthalate	39.2	10	µg/L	50.0		78.4	40-140			
1,2-Dichlorobenzene	35.1	5.0	µg/L	50.0		70.3	40-140			
1,3-Dichlorobenzene	34.8	5.0	µg/L	50.0		69.6	40-140			
1,4-Dichlorobenzene	34.6	5.0	µg/L	50.0		69.2	40-140			
3,3-Dichlorobenzidine	48.4	10	µg/L	50.0		96.7	40-140			
2,4-Dichlorophenol	42.2	10	µg/L	50.0		84.4	30-130			
Diethylphthalate	42.2	10	µg/L	50.0		84.4	40-140			
2,4-Dimethylphenol	37.9	10	µg/L	50.0		75.8	30-130			
Dimethylphthalate	43.8	10	µg/L	50.0		87.6	40-140			
2,4-Dinitrophenol	33.3	10	µg/L	50.0		66.7	15-140			V-05 †
2,4-Dinitrotoluene	43.6	10	µg/L	50.0		87.3	40-140			
2,6-Dinitrotoluene	45.4	10	µg/L	50.0		90.7	40-140			
Di-n-octylphthalate	36.7	10	µg/L	50.0		73.4	40-140			
1,2-Diphenylhydrazine/Azobenzene	38.0	10	µg/L	50.0		76.0	40-140			
Fluoranthene	41.7	5.0	µg/L	50.0		83.3	40-140			
Fluorene	42.2	5.0	µg/L	50.0		84.3	40-140			
Hexachlorobenzene	39.1	10	µg/L	50.0		78.3	40-140			

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

**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 B227443 - SW-846 3510C**

**LCS (B227443-BS1)**

Prepared: 04/04/19 Analyzed: 04/05/19

Hexachlorobutadiene	34.7	10	µg/L	50.0		69.4	40-140			
Hexachloroethane	35.1	10	µg/L	50.0		70.2	40-140			
Indeno(1,2,3-cd)pyrene	45.0	5.0	µg/L	50.0		89.9	40-140			
Isophorone	40.1	10	µg/L	50.0		80.2	40-140			
2-Methylnaphthalene	40.7	5.0	µg/L	50.0		81.4	40-140			
2-Methylphenol	37.7	10	µg/L	50.0		75.4	30-130			
3/4-Methylphenol	34.5	10	µg/L	50.0		69.0	30-130			
Naphthalene	37.8	5.0	µg/L	50.0		75.7	40-140			
Nitrobenzene	37.4	10	µg/L	50.0		74.7	40-140			
2-Nitrophenol	36.2	10	µg/L	50.0		72.3	30-130			
4-Nitrophenol	23.8	10	µg/L	50.0		47.5	15-140			†
Pentachlorophenol	38.9	10	µg/L	50.0		77.8	30-130			
Phenanthrene	41.0	5.0	µg/L	50.0		82.1	40-140			
Phenol	20.5	10	µg/L	50.0		41.0	15-140		R-05	†
Pyrene	43.8	5.0	µg/L	50.0		87.5	40-140			
1,2,4-Trichlorobenzene	36.6	5.0	µg/L	50.0		73.2	40-140			
2,4,5-Trichlorophenol	39.8	10	µg/L	50.0		79.6	30-130			
2,4,6-Trichlorophenol	41.1	10	µg/L	50.0		82.2	30-130			
Surrogate: 2-Fluorophenol	113		µg/L	200		56.5	15-110			
Surrogate: Phenol-d6	85.0		µg/L	200		42.5	15-110			
Surrogate: Nitrobenzene-d5	82.6		µg/L	100		82.6	30-130			
Surrogate: 2-Fluorobiphenyl	84.7		µg/L	100		84.7	30-130			
Surrogate: 2,4,6-Tribromophenol	197		µg/L	200		98.4	15-110			
Surrogate: p-Terphenyl-d14	94.0		µg/L	100		94.0	30-130			

**LCS Dup (B227443-BS1)**

Prepared: 04/04/19 Analyzed: 04/05/19

Acenaphthene	34.8	5.0	µg/L	50.0		69.7	40-140	12.8	20	
Acenaphthylene	34.6	5.0	µg/L	50.0		69.2	40-140	13.9	20	
Acetophenone	32.9	10	µg/L	50.0		65.8	40-140	17.5	20	
Aniline	26.2	5.0	µg/L	50.0		52.4	40-140	<b>28.3</b>	*	20 V-34
Anthracene	36.3	5.0	µg/L	50.0		72.7	40-140	12.9	20	
Benzo(a)anthracene	37.3	5.0	µg/L	50.0		74.7	40-140	11.8	20	
Benzo(a)pyrene	38.3	5.0	µg/L	50.0		76.7	40-140	13.6	20	
Benzo(b)fluoranthene	36.1	5.0	µg/L	50.0		72.2	40-140	14.3	20	
Benzo(g,h,i)perylene	40.0	5.0	µg/L	50.0		79.9	40-140	13.1	20	
Benzo(k)fluoranthene	37.3	5.0	µg/L	50.0		74.5	40-140	13.3	20	
Bis(2-chloroethoxy)methane	39.4	10	µg/L	50.0		78.8	40-140	14.1	20	
Bis(2-chloroethyl)ether	34.4	10	µg/L	50.0		68.9	40-140	17.2	20	
Bis(2-chloroisopropyl)ether	37.4	10	µg/L	50.0		74.9	40-140	16.1	20	
Bis(2-Ethylhexyl)phthalate	35.9	10	µg/L	50.0		71.7	40-140	10.4	20	
4-Bromophenylphenylether	35.7	10	µg/L	50.0		71.4	40-140	9.75	20	
Butylbenzylphthalate	39.2	10	µg/L	50.0		78.3	40-140	11.0	20	
4-Chloroaniline	29.7	10	µg/L	50.0		59.5	15-140	<b>26.3</b>	*	20 R-05, V-34 †
2-Chloronaphthalene	32.1	10	µg/L	50.0		64.2	40-140	8.99	20	
2-Chlorophenol	33.0	10	µg/L	50.0		66.1	30-130	17.6	20	
Chrysene	38.6	5.0	µg/L	50.0		77.1	40-140	10.3	20	
Dibenz(a,h)anthracene	37.2	5.0	µg/L	50.0		74.5	40-140	14.5	20	
Dibenzofuran	35.8	5.0	µg/L	50.0		71.6	40-140	15.2	20	
Di-n-butylphthalate	35.8	10	µg/L	50.0		71.7	40-140	9.01	20	
1,2-Dichlorobenzene	29.7	5.0	µg/L	50.0		59.4	40-140	16.8	20	
1,3-Dichlorobenzene	29.1	5.0	µg/L	50.0		58.2	40-140	18.0	20	
1,4-Dichlorobenzene	29.0	5.0	µg/L	50.0		58.0	40-140	17.6	20	

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

**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
<b>Batch B227443 - SW-846 3510C</b>										
<b>LCS Dup (B227443-BSD1)</b>										
					Prepared: 04/04/19 Analyzed: 04/05/19					
3,3-Dichlorobenzidine	42.4	10	µg/L	50.0		84.7	40-140	13.2	20	
2,4-Dichlorophenol	34.9	10	µg/L	50.0		69.8	30-130	18.9	20	
Diethylphthalate	36.8	10	µg/L	50.0		73.5	40-140	13.8	20	
2,4-Dimethylphenol	31.0	10	µg/L	50.0		62.0	30-130	20.0	20	
Dimethylphthalate	38.5	10	µg/L	50.0		77.0	40-140	12.9	20	
2,4-Dinitrophenol	28.9	10	µg/L	50.0		57.7	15-140	14.4	20	V-05 †
2,4-Dinitrotoluene	36.8	10	µg/L	50.0		73.6	40-140	17.0	20	
2,6-Dinitrotoluene	37.8	10	µg/L	50.0		75.6	40-140	18.1	20	
Di-n-octylphthalate	32.0	10	µg/L	50.0		64.0	40-140	13.7	20	
1,2-Diphenylhydrazine/Azobenzene	34.2	10	µg/L	50.0		68.4	40-140	10.6	20	
Fluoranthene	37.0	5.0	µg/L	50.0		74.0	40-140	11.9	20	
Fluorene	36.3	5.0	µg/L	50.0		72.6	40-140	14.9	20	
Hexachlorobenzene	34.4	10	µg/L	50.0		68.8	40-140	12.9	20	
Hexachlorobutadiene	29.8	10	µg/L	50.0		59.6	40-140	15.2	20	
Hexachloroethane	29.2	10	µg/L	50.0		58.4	40-140	18.4	20	
Indeno(1,2,3-cd)pyrene	38.2	5.0	µg/L	50.0		76.5	40-140	16.2	20	
Isophorone	35.0	10	µg/L	50.0		69.9	40-140	13.7	20	
2-Methylnaphthalene	34.7	5.0	µg/L	50.0		69.5	40-140	15.8	20	
2-Methylphenol	31.4	10	µg/L	50.0		62.8	30-130	18.3	20	
3/4-Methylphenol	28.6	10	µg/L	50.0		57.2	30-130	18.6	20	
Naphthalene	32.9	5.0	µg/L	50.0		65.8	40-140	14.1	20	
Nitrobenzene	31.8	10	µg/L	50.0		63.6	40-140	16.0	20	
2-Nitrophenol	31.0	10	µg/L	50.0		62.0	30-130	15.4	20	
4-Nitrophenol	19.4	10	µg/L	50.0		38.9	15-140	20.0	20	†
Pentachlorophenol	35.4	10	µg/L	50.0		70.8	30-130	9.40	20	
Phenanthrene	36.7	5.0	µg/L	50.0		73.4	40-140	11.2	20	
Phenol	16.4	10	µg/L	50.0		32.9	15-140	<b>21.9</b> *	20	R-05 †
Pyrene	39.2	5.0	µg/L	50.0		78.4	40-140	11.0	20	
1,2,4-Trichlorobenzene	31.5	5.0	µg/L	50.0		63.0	40-140	15.0	20	
2,4,5-Trichlorophenol	34.2	10	µg/L	50.0		68.4	30-130	15.1	20	
2,4,6-Trichlorophenol	35.7	10	µg/L	50.0		71.4	30-130	14.0	20	
Surrogate: 2-Fluorophenol	94.2		µg/L	200		47.1	15-110			
Surrogate: Phenol-d6	68.9		µg/L	200		34.4	15-110			
Surrogate: Nitrobenzene-d5	69.3		µg/L	100		69.3	30-130			
Surrogate: 2-Fluorobiphenyl	72.6		µg/L	100		72.6	30-130			
Surrogate: 2,4,6-Tribromophenol	166		µg/L	200		83.1	15-110			
Surrogate: p-Terphenyl-d14	83.6		µg/L	100		83.6	30-130			

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

**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 B227544 - SW-846 3510C**

**Blank (B227544-BLK1)**

Prepared: 04/05/19 Analyzed: 04/06/19

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							
Aroclor-1262	ND	0.10	µg/L							
Aroclor-1262 [2C]	ND	0.10	µg/L							
Aroclor-1268	ND	0.10	µg/L							
Aroclor-1268 [2C]	ND	0.10	µg/L							
Surrogate: Decachlorobiphenyl	1.48		µg/L	2.00		73.8	30-150			
Surrogate: Decachlorobiphenyl [2C]	1.48		µg/L	2.00		73.9	30-150			
Surrogate: Tetrachloro-m-xylene	1.16		µg/L	2.00		58.1	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	1.19		µg/L	2.00		59.3	30-150			

**LCS (B227544-BS1)**

Prepared: 04/05/19 Analyzed: 04/06/19

Aroclor-1016	0.42	0.20	µg/L	0.500		85.0	40-140			
Aroclor-1016 [2C]	0.42	0.20	µg/L	0.500		84.6	40-140			
Aroclor-1260	0.40	0.20	µg/L	0.500		79.4	40-140			
Aroclor-1260 [2C]	0.41	0.20	µg/L	0.500		82.3	40-140			
Surrogate: Decachlorobiphenyl	1.73		µg/L	2.00		86.5	30-150			
Surrogate: Decachlorobiphenyl [2C]	1.75		µg/L	2.00		87.3	30-150			
Surrogate: Tetrachloro-m-xylene	1.40		µg/L	2.00		70.2	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	1.43		µg/L	2.00		71.6	30-150			

**LCS Dup (B227544-BSD1)**

Prepared: 04/05/19 Analyzed: 04/06/19

Aroclor-1016	0.41	0.20	µg/L	0.500		81.2	40-140	4.53	20	
Aroclor-1016 [2C]	0.42	0.20	µg/L	0.500		83.2	40-140	1.67	20	
Aroclor-1260	0.38	0.20	µg/L	0.500		76.2	40-140	4.17	20	
Aroclor-1260 [2C]	0.40	0.20	µg/L	0.500		79.5	40-140	3.52	20	
Surrogate: Decachlorobiphenyl	1.67		µg/L	2.00		83.3	30-150			
Surrogate: Decachlorobiphenyl [2C]	1.73		µg/L	2.00		86.3	30-150			
Surrogate: Tetrachloro-m-xylene	1.40		µg/L	2.00		69.9	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	1.44		µg/L	2.00		71.9	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
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**Batch B227554 - SW-846 3005A**

**Blank (B227554-BLK1)**

Prepared: 04/05/19 Analyzed: 04/08/19

Antimony	ND	1.0	µg/L							
Arsenic	ND	0.40	µg/L							
Barium	ND	10	µg/L							
Beryllium	ND	0.40	µg/L							
Cadmium	ND	0.50	µg/L							
Chromium	ND	1.0	µg/L							
Copper	ND	5.0	µg/L							
Lead	ND	1.0	µg/L							
Manganese	ND	1.0	µg/L							
Nickel	ND	5.0	µg/L							
Selenium	ND	5.0	µg/L							
Silver	ND	0.50	µg/L							
Thallium	ND	0.20	µg/L							
Vanadium	ND	5.0	µg/L							
Zinc	ND	10	µg/L							

**LCS (B227554-BS1)**

Prepared: 04/05/19 Analyzed: 04/08/19

Antimony	550	10	µg/L	500		110	80-120			
Arsenic	544	4.0	µg/L	500		109	80-120			
Barium	541	100	µg/L	500		108	80-120			
Beryllium	542	4.0	µg/L	500		108	80-120			
Cadmium	555	5.0	µg/L	500		111	80-120			
Chromium	563	10	µg/L	500		113	80-120			
Copper	1100	50	µg/L	1000		110	80-120			
Lead	556	10	µg/L	500		111	80-120			
Manganese	548	10	µg/L	500		110	80-120			
Nickel	563	50	µg/L	500		113	80-120			
Selenium	538	50	µg/L	500		108	80-120			
Silver	422	5.0	µg/L	500		84.5	80-120			
Thallium	517	2.0	µg/L	500		103	80-120			
Vanadium	526	50	µg/L	500		105	80-120			
Zinc	1090	100	µg/L	1000		109	80-120			

**LCS Dup (B227554-BSD1)**

Prepared: 04/05/19 Analyzed: 04/08/19

Antimony	506	10	µg/L	500		101	80-120	8.26	20	
Arsenic	504	4.0	µg/L	500		101	80-120	7.71	20	
Barium	496	100	µg/L	500		99.2	80-120	8.76	20	
Beryllium	505	4.0	µg/L	500		101	80-120	7.20	20	
Cadmium	509	5.0	µg/L	500		102	80-120	8.63	20	
Chromium	516	10	µg/L	500		103	80-120	8.67	20	
Copper	1010	50	µg/L	1000		101	80-120	8.85	20	
Lead	510	10	µg/L	500		102	80-120	8.62	20	
Manganese	501	10	µg/L	500		100	80-120	8.98	20	
Nickel	519	50	µg/L	500		104	80-120	8.03	20	
Selenium	502	50	µg/L	500		100	80-120	6.97	20	
Silver	419	5.0	µg/L	500		83.8	80-120	0.778	20	
Thallium	477	2.0	µg/L	500		95.4	80-120	8.12	20	
Vanadium	490	50	µg/L	500		98.1	80-120	7.02	20	
Zinc	1010	100	µg/L	1000		101	80-120	7.73	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
<b>Batch B227561 - SW-846 7470A Prep</b>										
<b>Blank (B227561-BLK1)</b>				Prepared & Analyzed: 04/08/19						
Mercury	ND	0.00010	mg/L							
<b>LCS (B227561-BS1)</b>				Prepared & Analyzed: 04/08/19						
Mercury	0.00379	0.00010	mg/L	0.00400		94.7	80-120			
<b>LCS Dup (B227561-BSD1)</b>				Prepared & Analyzed: 04/08/19						
Mercury	0.00381	0.00010	mg/L	0.00400		95.2	80-120	0.563	20	
<b>Duplicate (B227561-DUP1)</b>				<b>Source: 19D0106-02</b>			Prepared & Analyzed: 04/08/19			
Mercury	ND	0.00010	mg/L		ND			NC	20	
<b>Matrix Spike (B227561-MS1)</b>				<b>Source: 19D0106-02</b>			Prepared & Analyzed: 04/08/19			
Mercury	0.00375	0.00010	mg/L	0.00400	ND	93.7	75-125			

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**QUALITY CONTROL**

**Metals Analyses (Dissolved) - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B227576 - SW-846 3005A Dissolved</b>										
<b>Blank (B227576-BLK1)</b>										
Prepared: 04/05/19 Analyzed: 04/08/19										
Arsenic	ND	0.40	µg/L							
<b>Blank (B227576-BLK2)</b>										
Prepared: 04/05/19 Analyzed: 04/23/19										
Nickel	ND	5.0	µg/L							
<b>LCS (B227576-BS1)</b>										
Prepared: 04/05/19 Analyzed: 04/08/19										
Arsenic	41.3	0.40	µg/L	40.0		103	80-120			
<b>LCS (B227576-BS2)</b>										
Prepared: 04/05/19 Analyzed: 04/23/19										
Nickel	38.7	5.0	µg/L	40.0		96.8	80-120			

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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
<b>Batch B227200 - SM19-22 4500 NH3 C</b>										
<b>Blank (B227200-BLK1)</b>				Prepared: 04/02/19 Analyzed: 04/03/19						
Ammonia as N	ND	0.30	mg/L							
<b>LCS (B227200-BS1)</b>				Prepared: 04/02/19 Analyzed: 04/03/19						
Ammonia as N	4.8	0.30	mg/L	5.00		95.8	81.5-113			
<b>LCS Dup (B227200-BSD1)</b>				Prepared: 04/02/19 Analyzed: 04/03/19						
Ammonia as N	4.8	0.30	mg/L	5.00		95.8	81.5-113	0.00	11.4	
<b>Batch B227277 - EPA 300.0</b>										
<b>Blank (B227277-BLK1)</b>				Prepared & Analyzed: 04/03/19						
Nitrate as N	ND	0.10	mg/L							
Nitrite as N	ND	0.100	mg/L							
<b>LCS (B227277-BS1)</b>				Prepared & Analyzed: 04/03/19						
Nitrate as N	0.96	0.10	mg/L	1.00		96.1	90-110			
Nitrite as N	1.05	0.100	mg/L	1.00		105	90-110			
<b>LCS Dup (B227277-BSD1)</b>				Prepared & Analyzed: 04/03/19						
Nitrate as N	0.92	0.10	mg/L	1.00		91.5	90-110	4.84	20	
Nitrite as N	1.06	0.100	mg/L	1.00		106	90-110	0.992	20	
<b>Batch B227283 - SM 21-22 4500 P E</b>										
<b>Blank (B227283-BLK1)</b>				Prepared & Analyzed: 04/02/19						
Orthophosphate as P	ND	0.050	mg/L							
<b>LCS (B227283-BS1)</b>				Prepared & Analyzed: 04/02/19						
Orthophosphate as P	0.13	0.050	mg/L	0.170		78.8	72-122			
<b>LCS Dup (B227283-BSD1)</b>				Prepared & Analyzed: 04/02/19						
Orthophosphate as P	0.19	0.050	mg/L	0.170		112	72-122	34.7 *	10.6	R-05
<b>Duplicate (B227283-DUP1)</b>				<b>Source: 19D0106-03</b>			Prepared & Analyzed: 04/02/19			
Orthophosphate as P	ND	0.050	mg/L		ND			NC	17	W-17
<b>Duplicate (B227283-DUP2)</b>				<b>Source: 19D0106-02</b>			Prepared & Analyzed: 04/02/19			
Orthophosphate as P	ND	0.050	mg/L		ND			NC	17	W-17
<b>Matrix Spike (B227283-MS1)</b>				<b>Source: 19D0106-03</b>			Prepared & Analyzed: 04/02/19			
Orthophosphate as P	0.30	0.050	mg/L	0.300	ND	100	55.9-148			W-17

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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
<b>Batch B227283 - SM 21-22 4500 P E</b>										
<b>Matrix Spike (B227283-MS2)</b>		<b>Source: 19D0106-02</b>			Prepared & Analyzed: 04/02/19					
Orthophosphate as P	0.32	0.050	mg/L	0.300	ND	108	55.9-148			W-17
<b>Batch B227312 - SM19-22 4500-N Org B,C-NH3 C</b>										
<b>Blank (B227312-BLK1)</b>		Prepared: 04/03/19 Analyzed: 04/04/19								
Total Kjeldahl Nitrogen	ND	1.0	mg/L							
<b>LCS (B227312-BS1)</b>		Prepared: 04/03/19 Analyzed: 04/04/19								
Total Kjeldahl Nitrogen	19	1.0	mg/L	20.0		95.8	75-117			
<b>Batch B227529 - SM19-22 4500 NH3 C</b>										
<b>Blank (B227529-BLK1)</b>		Prepared: 04/05/19 Analyzed: 04/06/19								
Ammonia as N	ND	0.30	mg/L							
<b>LCS (B227529-BS1)</b>		Prepared: 04/05/19 Analyzed: 04/06/19								
Ammonia as N	4.8	0.30	mg/L	5.00		95.8	81.5-113			
<b>LCS Dup (B227529-BSD1)</b>		Prepared: 04/05/19 Analyzed: 04/06/19								
Ammonia as N	4.9	0.30	mg/L	5.00		98.2	81.5-113	2.47	11.4	
<b>Batch B227568 - SM 21-22 4500 P E</b>										
<b>Blank (B227568-BLK1)</b>		Prepared & Analyzed: 04/07/19								
Phosphorus, Total	ND	0.050	mg/L							
<b>LCS (B227568-BS1)</b>		Prepared & Analyzed: 04/07/19								
Phosphorus, Total	0.22	0.050	mg/L	0.205		107	86.5-124			
<b>LCS Dup (B227568-BSD1)</b>		Prepared & Analyzed: 04/07/19								
Phosphorus, Total	0.22	0.050	mg/L	0.205		109	86.5-124	2.41	11	
<b>Duplicate (B227568-DUP2)</b>		<b>Source: 19D0106-04</b>			Prepared & Analyzed: 04/07/19					
Phosphorus, Total	ND	0.062	mg/L		ND			NC	38.5	
<b>Matrix Spike (B227568-MS2)</b>		<b>Source: 19D0106-04</b>			Prepared & Analyzed: 04/07/19					
Phosphorus, Total	0.30	0.062	mg/L	0.300	ND	101	28.2-163			
<b>Batch B227612 - EPA 300.0</b>										
<b>Blank (B227612-BLK1)</b>		Prepared & Analyzed: 04/09/19								
Chloride	ND	1.0	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
<b>Batch B227612 - EPA 300.0</b>										
<b>LCS (B227612-BS1)</b>				Prepared & Analyzed: 04/09/19						
Chloride	5.4	1.0	mg/L	5.00		107	90-110			
<b>LCS Dup (B227612-BSD1)</b>				Prepared & Analyzed: 04/09/19						
Chloride	5.3	1.0	mg/L	5.00		106	90-110	0.906	20	
<b>Duplicate (B227612-DUP1)</b>				<b>Source: 19D0106-03</b>		Prepared & Analyzed: 04/09/19				
Chloride	26	1.0	mg/L		26			0.217	20	
<b>Matrix Spike (B227612-MS1)</b>				<b>Source: 19D0106-03</b>		Prepared & Analyzed: 04/09/19				
Chloride	29	1.0	mg/L	5.00	26	<b>58.6</b>	* 80-120			MS-07

**IDENTIFICATION SUMMARY  
FOR SINGLE COMPONENT ANALYTES**

LCS
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*SW-846 8082A*

Lab Sample ID:           B227544-BS1                                Date(s) Analyzed:           04/06/2019                     04/06/2019          

Instrument ID (1):           ECD4                                                Instrument ID (2):           ECD4          

GC Column (1):                                      ID:                      (mm)                      GC Column (2):                                      ID:                      (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.42	
	2	0.000	0.000	0.000	0.42	2.4
Aroclor-1260	1	0.000	0.000	0.000	0.40	
	2	0.000	0.000	0.000	0.41	2.5

**IDENTIFICATION SUMMARY  
FOR SINGLE COMPONENT ANALYTES**

<b>LCS Dup</b>
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*SW-846 8082A*

Lab Sample ID: B227544-BSD1 Date(s) Analyzed: 04/06/2019 04/06/2019

Instrument ID (1): ECD4 Instrument ID (2): ECD4

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.41	
	2	0.000	0.000	0.000	0.42	2.4
Aroclor-1260	1	0.000	0.000	0.000	0.38	
	2	0.000	0.000	0.000	0.40	5.1



**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.
L-02	Laboratory fortified blank/laboratory control sample recovery and duplicate recoveries outside of control limits. Data validation is not affected since all results are "not detected" for associated samples in this batch and bias is on the high side.
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.
MS-07	Matrix spike recovery is outside of control limits. Analysis is in control based on laboratory fortified blank recovery. Possibility of sample matrix effects that lead to low bias for reported result or non-homogeneous sample aliquot cannot be eliminated.
R-05	Laboratory fortified blank duplicate RPD is outside of control limits. Reduced precision is anticipated for any reported value for this compound.
RL-07	Elevated reporting limit based on lowest point in calibration. MA CAM reporting limit not met.
V-05	Continuing calibration verification (CCV) did not meet method specifications and was biased on the low side for this compound.
V-16	Response factor is less than method specified minimum acceptable value. Reduced precision and accuracy may be associated with reported result.
V-20	Continuing calibration verification (CCV) 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.
W-17	Samples analyzed for Ortho phosphate were not filtered within 15 minutes of sampling.

**CERTIFICATIONS**

**Certified Analyses included in this Report**

Analyte	Certifications
<b><i>EPA 300.0 in Water</i></b>	
Chloride	NC,NY,MA,VA,ME,NH,CT,RI
Nitrate as N	NC,NY,MA,VA,ME,NH,CT,RI
Nitrite as N	NY,NC,NH,VA,ME,CT,RI
<b><i>SM 21-22 4500 PE in Water</i></b>	
Orthophosphate as P	CT,MA,NH,NY,RI,ME,VA
Phosphorus, Total	CT,MA,NH,NY,RI,NC,ME,VA
<b><i>SM19-22 4500 NH3 C in Water</i></b>	
Ammonia as N	NY,MA,CT,RI,VA,NC,ME
<b><i>SM19-22 4500-N Org B,C-NH3 C in Water</i></b>	
Total Kjeldahl Nitrogen	CT,MA,NH,NY,RI,NC,ME,VA
<b><i>SW-846 6020B in Water</i></b>	
Antimony	CT,NH,NY,ME,VA,NC
Arsenic	CT,NH,NY,NC,ME,VA
Arsenic	CT,NH,NY,ME,VA,NC
Barium	CT,NH,NY,ME,VA,NC
Beryllium	CT,NH,NY,ME,VA,NC
Cadmium	CT,NH,NY,RI,ME,VA,NC
Chromium	CT,NH,NY,ME,VA,NC
Copper	CT,NH,NY,ME,VA,NC
Lead	CT,NH,NY,ME,VA,NC
Manganese	CT,NH,NY,ME,VA,NC
Nickel	CT,NH,NY,NC,ME,VA
Nickel	CT,NH,NY,ME,VA,NC
Selenium	CT,NH,NY,ME,VA,NC
Silver	CT,NH,NY,ME,VA,NC
Thallium	CT,NH,NY,ME,VA,NC
Vanadium	CT,NH,NY,ME,VA,NC
Zinc	CT,NH,NY,ME,VA,NC
<b><i>SW-846 7470A in Water</i></b>	
Mercury	CT,NH,NY,NC,ME,VA
<b><i>SW-846 8082A in Water</i></b>	
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

## CERTIFICATIONS

## Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8082A in Water</i>	
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 Water</i>	
Acetone	CT,NH,NY,ME
tert-Amyl Methyl Ether (TAME)	NH,NY,ME
Benzene	CT,NH,NY,ME
Bromobenzene	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	NY,ME
sec-Butylbenzene	NY,ME
tert-Butylbenzene	NY,ME
tert-Butyl Ethyl Ether (TBEE)	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	NY,ME
4-Chlorotoluene	NY,ME
1,2-Dibromo-3-chloropropane (DBCP)	NY
1,2-Dibromoethane (EDB)	NY
Dibromomethane	NH,NY,ME
1,2-Dichlorobenzene	CT,NY,ME
1,3-Dichlorobenzene	CT,NH,NY,ME
1,4-Dichlorobenzene	CT,NH,NY,ME
Dichlorodifluoromethane (Freon 12)	NH,NY,ME
1,1-Dichloroethane	CT,NH,NY,ME
1,2-Dichloroethane	CT,NH,NY,ME
1,1-Dichloroethylene	CT,NH,NY,ME
cis-1,2-Dichloroethylene	NY,ME
trans-1,2-Dichloroethylene	CT,NH,NY,ME
1,2-Dichloropropane	CT,NH,NY,ME
1,3-Dichloropropane	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
Diisopropyl Ether (DIPE)	NH,NY,ME

**CERTIFICATIONS**

**Certified Analyses included in this Report**

<b>Analyte</b>	<b>Certifications</b>
<b><i>SW-846 8260C in Water</i></b>	
Ethylbenzene	CT,NH,NY,ME
Hexachlorobutadiene	CT,NH,NY,ME
2-Hexanone (MBK)	CT,NH,NY,ME
Isopropylbenzene (Cumene)	NY,ME
p-Isopropyltoluene (p-Cymene)	CT,NH,NY,ME
Methyl tert-Butyl Ether (MTBE)	CT,NH,NY,ME
Methylene Chloride	CT,NH,NY,ME
4-Methyl-2-pentanone (MIBK)	CT,NH,NY,ME
Naphthalene	NH,NY,ME
n-Propylbenzene	CT,NH,NY,ME
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	NH,NY,ME
1,2,4-Trichlorobenzene	CT,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	NY,ME
1,3,5-Trimethylbenzene	NY,ME
Vinyl Chloride	CT,NH,NY,ME
m+p Xylene	CT,NH,NY,ME
o-Xylene	CT,NH,NY,ME
<b><i>SW-846 8270D in Water</i></b>	
Acenaphthene	CT,NY,NH
Acenaphthylene	CT,NY,NH
Acetophenone	NY
Aniline	CT,NY
Anthracene	CT,NY,NH
Benzo(a)anthracene	CT,NY,NH
Benzo(a)pyrene	CT,NY,NH
Benzo(b)fluoranthene	CT,NY,NH
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

**CERTIFICATIONS**

**Certified Analyses included in this Report**

Analyte	Certifications
<i>SW-846 8270D in Water</i>	
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	CT,NY,NH
1,3-Dichlorobenzene	CT,NY,NH
1,4-Dichlorobenzene	CT,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/Azobenzene	NY
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
2,4,5-Trichlorophenol	CT,NY,NH
2,4,6-Trichlorophenol	CT,NY,NH

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

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2005	100033	03/1/2020
MA	Massachusetts DEP	M-MA100	06/30/2019
CT	Connecticut Department of Public Health	PH-0567	09/30/2019
NY	New York State Department of Health	10899 NELAP	04/1/2020
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2020
RI	Rhode Island Department of Health	LAO00112	12/30/2019
NC	North Carolina Div. of Water Quality	652	12/31/2019
NJ	New Jersey DEP	MA007 NELAP	06/30/2019
FL	Florida Department of Health	E871027 NELAP	06/30/2019
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2019
ME	State of Maine	2011028	06/9/2019
VA	Commonwealth of Virginia	460217	12/14/2019
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2019
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2019
NC-DW	North Carolina Department of Health	25703	07/31/2019

Company Name: **Vertex**  
Address: **100 N Washington St Boston MA**  
Phone: **781-917-5360**  
Project Name: **W&S Corp 46746 - Stoneham**  
Project Location: **Wayland MA**  
Project Number: **46047**  
Project Manager: **K. Sarson**  
Con-Test Quote Name/Number:  
Invoice Recipient: **K. Sarson**  
Sampled By: **K. Sarson**

**Requested Turnaround Time**  
7-Day  10-Day   
Due Date: **5-DAY**

**Rush Approval Required**  
1-Day  3-Day   
2-Day  4-Day

**Data Delivery**  
Format: PDF  EXCEL   
Other: **AD**  
CLP Like Data Pkg Required:   
Email To: **ksarson@vertexeng.com**  
Fax To #:

Requested Turnaround Time	7-Day	10-Day	1	1	3	2	2	1	1							
Due Date:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	N	N	H	I	I	S	T							
<b>Rush Approval Required</b>	<input type="checkbox"/>	<input type="checkbox"/>	P	P	V	A	A	P	T							
<b>Data Delivery</b>	<input type="checkbox"/>	<input type="checkbox"/>														
<b>ANALYSIS REQUESTED</b>																
Diss Arsenic			X													
Total MCP 14 Metals			X													
8260			X													
8270			X													
PCB 8082			X													
Armo/Total Ni/Phos			X													
Nitrate/nitrite/chloride			X													

**# of Containers**  
**2 Preservation Code**  
**3 Container Code**

**Dissolved Metals Samples**  
 Field Filtered  
 Lab to Filter

**Orthophosphate Samples**  
 Field Filtered  
 Lab to Filter

Con-Test Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	Composite	Grab	Matrix Code	Conc Code										
1	V-103(MW)	4/2/19	0730		Y	GW		X	X	X	X	X	X	X	X		
2	V-106(MW)	↓	0930		↓	↓		X	C	X	X	X	X	X	X		
3	V-104(MW)	↓	1215		↓	↓		X	X	X	X	X	X	X	X		
4	MW-3	↓	1435		↓	↓		X	X	X	X	X	X	X	X		

changes made per client. JLH 4/3/19  
add Cu and Mg  
Client requested Diss Ni on sample  
-02 JLH 4/22/19

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

**1 Matrix Codes:**  
GW = Ground Water  
WW = Waste Water  
DW = Drinking Water  
A = Air  
S = Soil  
SL = Sludge  
SOL = Solid  
O = Other (please define)

**2 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)

**3 Container Codes:**  
A = Amber Glass  
G = Glass  
P = Plastic  
ST = Sterile  
V = Vial  
S = Summa Canister  
T = Tedlar Bag  
O = Other (please define)

Relinquished by: (signature) **[Signature]** Date/Time: **4/2/19 1525**

Received by: (signature) **[Signature]** Date/Time: **4/2/19 1525**

Relinquished by: (signature) **[Signature]** Date/Time: **4/2/19 1730**

Received by: (signature) **[Signature]** Date/Time: **4/2/19 1730**

Relinquished by: (signature) **[Signature]** Date/Time: **4/2/19 1730**

Received by: (signature) **[Signature]** Date/Time: **4/2/19 1730**

Relinquished by: (signature) **[Signature]** Date/Time: **4/2/19 1730**

Received by: (signature) **[Signature]** Date/Time: **4/2/19 1730**

**Detection Limit Requirements**  
MA

**Special Requirements**  
 MA MCP Required  
 MCP Certification Form Required  
 CT RCP Required  
 RCP Certification Form Required  
 MA State DW Required

**Other:**  
PWSID #

**NELAC and AIHA-LAP, LLC Accredited**



**Project Entity**

Government  Municipality  MWRA  WRTA  
 Federal  21 J  School  
 City  Brownfield  MBTA

**Other**

Chromatogram  
 AIHA-LAP, LLC

**PCB ONLY**  
 Soxhlet  
 Non Soxhlet

I Have Not Confirmed Sample Container Numbers With Lab Staff Before Relinquishing Over Samples \_\_\_\_\_



**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 Vortex

Received By [Signature] Date 4/2/19 Time 17:30

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 # 5 Actual Temp - 3.8, 3.8  
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 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? F Who was notified? \_\_\_\_\_

Are there Short Holds? T Who was notified? TRM9

Is there enough Volume? T

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? \_\_\_\_\_ Acid TL2 Base \_\_\_\_\_

Vials	#	Containers:	#	#	#	#
Unp-		1 Liter Amb.	8	1 Liter Plastic	4	16 oz Amb.
HCL-	9	500 mL Amb.		500 mL Plastic	3	8oz Amb/Clear
Meoh-		250 mL Amb.	6	250 mL Plastic	8	4oz Amb/Clear
Bisulfate-		Flashpoint		Col./Bacteria		2oz Amb/Clear
DI-		Other Glass	2	Other Plastic		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-	1	500 mL Amb.		500 mL Plastic		8oz Amb/Clear
Meoh-		250 mL Amb.	8	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		

Comments:



## MADEP MCP Analytical Method Report Certification Form

Laboratory Name: Con-Test Analytical Laboratory	Project #: 19D0106
Project Location: Wayland, MA	RTN:

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]  
19D0106-01 thru 19D0106-04

Matrices: Water

**CAM Protocol (check all that below)**

8260 VOC CAM II A (X)	7470/7471 Hg CAM III B (X)	MassDEP VPH CAM IV A ( )	8082 PCB CAM V A (X)	9014 Total Cyanide/PAC CAM VI A ( )	6860 Perchlorate CAM VIII B ( )
8270 SVOC CAM II B (X)	7010 Metals CAM III C ( )	MassDEP VPH CAM IV C ( )	8081 Pesticides CAM V B ( )	7196 Hex Cr CAM VI B ( )	MassDEP APH CAM IX A ( )
6010 Metals CAM III A ( )	6020 Metals CAM III D (X)	MassDEP EPH CAM IV B ( )	8151 Herbicides CAM V C ( )	8330 Explosives CAM VIII A ( )	TO-15 VOC CAM IX B ( )

**Affirmative response to Questions A through F is required for "Presumptive Certainty" status**

<b>A</b>	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?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>B</b>	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>C</b>	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>D</b>	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?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>E a</b>	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).	<input type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>E b</b>	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	<input type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>F</b>	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)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>

**A response to questions G, H and I below is required for "Presumptive Certainty" status**

<b>G</b>	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <sup>1</sup>
----------	---	--

**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.**

<b>H</b>	Were all QC performance standards specified in the CAM protocol(s) achieved?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <sup>1</sup>
<b>I</b>	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>

<sup>1</sup>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: Lisa Worthington Position: Technical Representative  
Printed Name: Lisa A. Worthington Date: 04/09/19

April 5, 2019

Kristen Sarson  
Vertex Engineering - Boston  
100 North Washington St. Suite 302  
Boston, MA 02114

Project Location: Wayland, MA  
Client Job Number:  
Project Number: 46047  
Laboratory Work Order Number: 19C1572

Enclosed are results of analyses for samples received by the laboratory on March 29, 2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jessica L. Hoffman  
Project Manager

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

Vertex Engineering - Boston  
 100 North Washington St. Suite 302  
 Boston, MA 02114  
 ATTN: Kristen Sarson

REPORT DATE: 4/5/2019

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 46047

**ANALYTICAL SUMMARY**

WORK ORDER NUMBER: 19C1572

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

PROJECT LOCATION: Wayland, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
V-107 (5-10)	19C1572-01	Soil		SM 2540G SM21-22 2510B Modified SW-846 1030 SW-846 6010D 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	
V-108 (0-5)	19C1572-02	Soil		SM 2540G SM21-22 2510B Modified SW-846 1030 SW-846 6010D 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	
V-109 (5-10)	19C1572-03	Soil		SM 2540G SM21-22 2510B Modified SW-846 1030 SW-846 6010D 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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Vertex Engineering - Boston  
 100 North Washington St. Suite 302  
 Boston, MA 02114  
 ATTN: Kristen Sarson

REPORT DATE: 4/5/2019

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 46047

**ANALYTICAL SUMMARY**

WORK ORDER NUMBER: 19C1572

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

PROJECT LOCATION: Wayland, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
V-110 (5-10)	19C1572-04	Soil		SM 2540G SM21-22 2510B Modified SW-846 1030 SW-846 6010D 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	
V-111 (0-10)	19C1572-05	Soil		SM 2540G SM21-22 2510B Modified SW-846 1030 SW-846 6010D 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	
V-112 (0-5)	19C1572-06	Soil		SM 2540G SM21-22 2510B Modified SW-846 1030 SW-846 6010D 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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Vertex Engineering - Boston  
 100 North Washington St. Suite 302  
 Boston, MA 02114  
 ATTN: Kristen Sarson

REPORT DATE: 4/5/2019

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 46047

**ANALYTICAL SUMMARY**

WORK ORDER NUMBER: 19C1572

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

PROJECT LOCATION: Wayland, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
V-113 (0-5)	19C1572-07	Soil		SM 2540G SM21-22 2510B Modified SW-846 1030 SW-846 6010D 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	
V-114 (5-10)	19C1572-08	Soil		SM 2540G SM21-22 2510B Modified SW-846 1030 SW-846 6010D 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	
V-115 (5-10)	19C1572-09	Soil		SM 2540G SW-846 8082A	
V-116 (0-5)	19C1572-10	Soil		SM 2540G SW-846 8082A	

**CASE NARRATIVE SUMMARY**

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



39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332  
SW-846 6010D

**Qualifications:****MS-07**

Matrix spike recovery is outside of control limits. Analysis is in control based on laboratory fortified blank recovery. Possibility of sample matrix effects that lead to low bias for reported result or non-homogeneous sample aliquot cannot be eliminated.

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

19C1572-06[V-112 (0-5)], B227367-MS1

SW-846 8082A

**Qualifications:****O-32**

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

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

19C1572-01[V-107 (5-10)], 19C1572-02[V-108 (0-5)], 19C1572-03[V-109 (5-10)], 19C1572-04[V-110 (5-10)], 19C1572-05[V-111 (0-10)], 19C1572-06[V-112 (0-5)], 19C1572-07[V-113 (0-5)], 19C1572-08[V-114 (5-10)], 19C1572-09[V-115 (5-10)], 19C1572-10[V-116 (0-5)]

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:****Vinyl Chloride**

19C1572-01[V-107 (5-10)], 19C1572-02[V-108 (0-5)], 19C1572-03[V-109 (5-10)], 19C1572-04[V-110 (5-10)], 19C1572-05[V-111 (0-10)], 19C1572-06[V-112 (0-5)], 19C1572-07[V-113 (0-5)], 19C1572-08[V-114 (5-10)], B227113-BLK1, B227113-BS1, B227113-BSD1, B227135-BLK1, B227135-BS1, B227135-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**

19C1572-01[V-107 (5-10)], 19C1572-02[V-108 (0-5)], 19C1572-03[V-109 (5-10)], 19C1572-04[V-110 (5-10)], 19C1572-05[V-111 (0-10)], 19C1572-06[V-112 (0-5)], 19C1572-07[V-113 (0-5)], 19C1572-08[V-114 (5-10)], B227113-BLK1, B227113-BS1, B227113-BSD1, B227135-BLK1, B227135-BS1, B227135-BSD1

**V-20**

Continuing calibration verification (CCV) 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:****Bromoform**

B227113-BS1, B227113-BSD1, B227135-BS1, B227135-BSD1, S034201-CCV1, S034203-CCV1

**Methyl tert-Butyl Ether (MTBE)**

B227113-BS1, B227113-BSD1, B227135-BS1, B227135-BSD1, S034201-CCV1, S034203-CCV1

**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**

19C1572-01[V-107 (5-10)], 19C1572-02[V-108 (0-5)], 19C1572-03[V-109 (5-10)], 19C1572-04[V-110 (5-10)], 19C1572-05[V-111 (0-10)], 19C1572-06[V-112 (0-5)], 19C1572-07[V-113 (0-5)], 19C1572-08[V-114 (5-10)], B227113-BLK1, B227113-BS1, B227113-BSD1, B227135-BLK1, B227135-BS1, B227135-BSD1, S034201-CCV1, S034203-CCV1

SW-846 8270D

**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:****Aniline**

B227222-BS1

**V-05**  
Continuing calibration verification (CCV) did not meet method specifications and was biased on the low side for this compound.

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

**2-Methylphenol**

19C1572-01[V-107 (5-10)], 19C1572-02[V-108 (0-5)], 19C1572-03[V-109 (5-10)], 19C1572-04[V-110 (5-10)], 19C1572-05[V-111 (0-10)], 19C1572-06[V-112 (0-5)], 19C1572-07[V-113 (0-5)], 19C1572-08[V-114 (5-10)], B227222-BLK1, B227222-BS1, B227222-BSD1, B227222-MS1, B227222-MSD1, S034267-CCV1

**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**

19C1572-01[V-107 (5-10)], 19C1572-02[V-108 (0-5)], 19C1572-03[V-109 (5-10)], 19C1572-04[V-110 (5-10)], 19C1572-05[V-111 (0-10)], 19C1572-06[V-112 (0-5)], 19C1572-07[V-113 (0-5)], 19C1572-08[V-114 (5-10)], B227222-BLK1, B227222-BS1, B227222-BSD1, B227222-MS1, B227222-MSD1, S034267-CCV1

**4-Chloroaniline**

19C1572-01[V-107 (5-10)], 19C1572-02[V-108 (0-5)], 19C1572-03[V-109 (5-10)], 19C1572-04[V-110 (5-10)], 19C1572-05[V-111 (0-10)], 19C1572-06[V-112 (0-5)], 19C1572-07[V-113 (0-5)], 19C1572-08[V-114 (5-10)], B227222-BLK1, B227222-BS1, B227222-BSD1, B227222-MS1, B227222-MSD1, S034267-CCV1

**Aniline**

19C1572-01[V-107 (5-10)], 19C1572-02[V-108 (0-5)], 19C1572-03[V-109 (5-10)], 19C1572-04[V-110 (5-10)], 19C1572-05[V-111 (0-10)], 19C1572-06[V-112 (0-5)], 19C1572-07[V-113 (0-5)], 19C1572-08[V-114 (5-10)], B227222-BLK1, B227222-BS1, B227222-BSD1, B227222-MS1, B227222-MSD1, S034267-CCV1

**SW-846 9045C**

**Qualifications:**

**H-03**

Sample received after recommended holding time was exceeded.

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

**pH**

19C1572-01[V-107 (5-10)], 19C1572-02[V-108 (0-5)], 19C1572-03[V-109 (5-10)], 19C1572-04[V-110 (5-10)], 19C1572-05[V-111 (0-10)], 19C1572-06[V-112 (0-5)], 19C1572-07[V-113 (0-5)], 19C1572-08[V-114 (5-10)], B227052-DUP1

**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: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-107 (5-10)

Sampled: 3/27/2019 13:05

Sample ID: 19C1572-01

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.076	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00076	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
Benzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
Bromobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
Bromochloromethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
Bromodichloromethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
Bromoform	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
Bromomethane	ND	0.0076	mg/Kg dry	1	V-34	SW-846 8260C	4/1/19	4/1/19 15:19	MFF
2-Butanone (MEK)	ND	0.030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
n-Butylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
sec-Butylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
tert-Butylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00076	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
Carbon Disulfide	ND	0.0046	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
Carbon Tetrachloride	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
Chlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
Chlorodibromomethane	ND	0.00076	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
Chloroethane	ND	0.0076	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
Chloroform	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
Chloromethane	ND	0.0076	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
2-Chlorotoluene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
4-Chlorotoluene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
1,2-Dibromoethane (EDB)	ND	0.00076	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
Dibromomethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
1,2-Dichlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
1,3-Dichlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
1,4-Dichlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0076	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
1,1-Dichloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
1,2-Dichloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
1,1-Dichloroethylene	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
cis-1,2-Dichloroethylene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
trans-1,2-Dichloroethylene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
1,2-Dichloropropane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
1,3-Dichloropropane	ND	0.00076	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
2,2-Dichloropropane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
1,1-Dichloropropene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
cis-1,3-Dichloropropene	ND	0.00076	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
trans-1,3-Dichloropropene	ND	0.00076	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
Diethyl Ether	ND	0.0076	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
Diisopropyl Ether (DIPE)	ND	0.00076	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
1,4-Dioxane	ND	0.076	mg/Kg dry	1	V-16	SW-846 8260C	4/1/19	4/1/19 15:19	MFF
Ethylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-107 (5-10)

Sampled: 3/27/2019 13:05

Sample ID: 19C1572-01

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
2-Hexanone (MBK)	ND	0.015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
Isopropylbenzene (Cumene)	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
Methylene Chloride	ND	0.0076	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
Naphthalene	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
n-Propylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
Styrene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
1,1,1,2-Tetrachloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
1,1,1,2,2-Tetrachloroethane	ND	0.00076	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
Tetrachloroethylene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
Tetrahydrofuran	ND	0.0076	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
Toluene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
1,2,3-Trichlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
1,2,4-Trichlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
1,1,1-Trichloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
1,1,2-Trichloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
Trichloroethylene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0076	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
1,2,3-Trichloropropane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
1,2,4-Trimethylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
1,3,5-Trimethylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
Vinyl Chloride	ND	0.0076	mg/Kg dry	1	L-04	SW-846 8260C	4/1/19	4/1/19 15:19	MFF
m+p Xylene	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF
o-Xylene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:19	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	97.7	70-130	4/1/19 15:19
Toluene-d8	97.4	70-130	4/1/19 15:19
4-Bromofluorobenzene	97.7	70-130	4/1/19 15:19

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-107 (5-10)

Sampled: 3/27/2019 13:05

Sample ID: 19C1572-01

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.17	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
Acenaphthylene	ND	0.17	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
Acetophenone	ND	0.34	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
Aniline	ND	0.34	mg/Kg dry	1	V-34	SW-846 8270D	4/2/19	4/3/19 15:47	IMR
Anthracene	ND	0.17	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
Benzo(a)anthracene	ND	0.17	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
Benzo(a)pyrene	ND	0.17	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
Benzo(b)fluoranthene	ND	0.17	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
Benzo(g,h,i)perylene	ND	0.17	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
Benzo(k)fluoranthene	ND	0.17	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
Bis(2-chloroethoxy)methane	ND	0.34	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
Bis(2-chloroethyl)ether	ND	0.34	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
Bis(2-chloroisopropyl)ether	ND	0.34	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.34	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
4-Bromophenylphenylether	ND	0.34	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
Butylbenzylphthalate	ND	0.34	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
4-Chloroaniline	ND	0.66	mg/Kg dry	1	V-34	SW-846 8270D	4/2/19	4/3/19 15:47	IMR
2-Chloronaphthalene	ND	0.34	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
2-Chlorophenol	ND	0.34	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
Chrysene	ND	0.17	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
Dibenz(a,h)anthracene	ND	0.17	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
Dibenzofuran	ND	0.34	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
Di-n-butylphthalate	ND	0.34	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
1,2-Dichlorobenzene	ND	0.34	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
1,3-Dichlorobenzene	ND	0.34	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
1,4-Dichlorobenzene	ND	0.34	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
3,3-Dichlorobenzidine	ND	0.17	mg/Kg dry	1	V-34	SW-846 8270D	4/2/19	4/3/19 15:47	IMR
2,4-Dichlorophenol	ND	0.34	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
Diethylphthalate	ND	0.34	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
2,4-Dimethylphenol	ND	0.34	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
Dimethylphthalate	ND	0.34	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
2,4-Dinitrophenol	ND	0.66	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
2,4-Dinitrotoluene	ND	0.34	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
2,6-Dinitrotoluene	ND	0.34	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
Di-n-octylphthalate	ND	0.34	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.34	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
Fluoranthene	ND	0.17	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
Fluorene	ND	0.17	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
Hexachlorobenzene	ND	0.34	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
Hexachlorobutadiene	ND	0.34	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
Hexachloroethane	ND	0.34	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
Indeno(1,2,3-cd)pyrene	ND	0.17	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
Isophorone	ND	0.34	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
2-Methylnaphthalene	ND	0.17	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-107 (5-10)

Sampled: 3/27/2019 13:05

Sample ID: 19C1572-01

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	0.34	mg/Kg dry	1	V-05	SW-846 8270D	4/2/19	4/3/19 15:47	IMR
3/4-Methylphenol	ND	0.34	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
Naphthalene	ND	0.17	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
Nitrobenzene	ND	0.34	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
2-Nitrophenol	ND	0.34	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
4-Nitrophenol	ND	0.66	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
Pentachlorophenol	ND	0.34	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
Phenanthrene	ND	0.17	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
Phenol	ND	0.34	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
Pyrene	ND	0.17	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
1,2,4-Trichlorobenzene	ND	0.34	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
2,4,5-Trichlorophenol	ND	0.34	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
2,4,6-Trichlorophenol	ND	0.34	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 15:47	IMR
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2-Fluorophenol		70.5	30-130					4/3/19 15:47	
Phenol-d6		82.6	30-130					4/3/19 15:47	
Nitrobenzene-d5		81.6	30-130					4/3/19 15:47	
2-Fluorobiphenyl		90.5	30-130					4/3/19 15:47	
2,4,6-Tribromophenol		94.2	30-130					4/3/19 15:47	
p-Terphenyl-d14		115	30-130					4/3/19 15:47	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-107 (5-10)

Sampled: 3/27/2019 13:05

Sample ID: 19C1572-01

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 16:55	JMB
Aroclor-1221 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 16:55	JMB
Aroclor-1232 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 16:55	JMB
Aroclor-1242 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 16:55	JMB
Aroclor-1248 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 16:55	JMB
Aroclor-1254 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 16:55	JMB
Aroclor-1260 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 16:55	JMB
Aroclor-1262 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 16:55	JMB
Aroclor-1268 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 16:55	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		97.9	30-150					4/4/19 16:55	
Decachlorobiphenyl [2]		93.9	30-150					4/4/19 16:55	
Tetrachloro-m-xylene [1]		97.4	30-150					4/4/19 16:55	
Tetrachloro-m-xylene [2]		95.2	30-150					4/4/19 16:55	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Sampled: 3/27/2019 13:05

Field Sample #: V-107 (5-10)

Sample ID: 19C1572-01

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	ND	8.4	mg/Kg dry	1		SW-846 8100 Modified	4/2/19	4/4/19 4:52	RMW
<b>Surrogates</b>		<b>% Recovery</b>	<b>Recovery Limits</b>		<b>Flag/Qual</b>				
2-Fluorobiphenyl		69.1	40-140					4/4/19 4:52	



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-107 (5-10)

Sampled: 3/27/2019 13:05

Sample ID: 19C1572-01

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.7	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 16:34	MJH
Arsenic	11	1.7	mg/Kg dry	1		SW-846 6010D	4/3/19	4/5/19 13:00	EJB
Barium	27	1.7	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 16:34	MJH
Beryllium	0.27	0.17	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 16:34	MJH
Cadmium	0.34	0.17	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 16:34	MJH
Chromium	12	0.34	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 16:34	MJH
Lead	6.1	0.51	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 16:34	MJH
Mercury	ND	0.025	mg/Kg dry	1		SW-846 7471B	4/2/19	4/3/19 12:58	TBC
Nickel	9.3	0.34	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 16:34	MJH
Selenium	ND	3.4	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 16:34	MJH
Silver	0.42	0.34	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 16:34	MJH
Thallium	ND	1.7	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 22:31	EJB
Vanadium	17	0.68	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 16:34	MJH
Zinc	26	0.68	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 16:34	MJH

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-107 (5-10)

Sampled: 3/27/2019 13:05

Sample ID: 19C1572-01

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	97.0		% Wt	1		SM 2540G	4/3/19	4/4/19 0:58	AVF
Ignitability	Absent		present/absent	1		SW-846 1030	4/2/19	4/2/19 19:15	DJM
pH @22.2°C	8.1		pH Units	1	H-03	SW-846 9045C	3/30/19	3/30/19 15:04	AIA
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	3/30/19	3/31/19 10:20	KMV
Reactive Sulfide	ND	19	mg/L	1		SW-846 9030A	3/30/19	3/31/19 9:50	KMV
Specific conductance	4.9	2.0	µmhos/cm	1		SM21-22 2510B Modified	3/31/19	3/31/19 11:45	KMV

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-108 (0-5)

Sampled: 3/27/2019 13:15

Sample ID: 19C1572-02

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.088	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00088	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
Benzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
Bromobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
Bromochloromethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
Bromodichloromethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
Bromoform	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
Bromomethane	ND	0.0088	mg/Kg dry	1	V-34	SW-846 8260C	4/1/19	4/1/19 15:43	MFF
2-Butanone (MEK)	ND	0.035	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
n-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
sec-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
tert-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00088	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
Carbon Disulfide	ND	0.0053	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
Carbon Tetrachloride	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
Chlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
Chlorodibromomethane	ND	0.00088	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
Chloroethane	ND	0.0088	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
Chloroform	ND	0.0035	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
Chloromethane	ND	0.0088	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
2-Chlorotoluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
4-Chlorotoluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
1,2-Dibromoethane (EDB)	ND	0.00088	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
Dibromomethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
1,2-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
1,3-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
1,4-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0088	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
1,1-Dichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
1,2-Dichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
1,1-Dichloroethylene	ND	0.0035	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
cis-1,2-Dichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
trans-1,2-Dichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
1,2-Dichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
1,3-Dichloropropane	ND	0.00088	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
2,2-Dichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
1,1-Dichloropropene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
cis-1,3-Dichloropropene	ND	0.00088	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
trans-1,3-Dichloropropene	ND	0.00088	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
Diethyl Ether	ND	0.0088	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
Diisopropyl Ether (DIPE)	ND	0.00088	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
1,4-Dioxane	ND	0.088	mg/Kg dry	1	V-16	SW-846 8260C	4/1/19	4/1/19 15:43	MFF
Ethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-108 (0-5)

Sampled: 3/27/2019 13:15

Sample ID: 19C1572-02

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
2-Hexanone (MBK)	ND	0.018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
Isopropylbenzene (Cumene)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0035	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
Methylene Chloride	ND	0.0088	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
Naphthalene	ND	0.0035	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
n-Propylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
Styrene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
1,1,1,2-Tetrachloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
1,1,1,2,2-Tetrachloroethane	ND	0.00088	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
Tetrachloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
Tetrahydrofuran	ND	0.0088	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
Toluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
1,2,3-Trichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
1,2,4-Trichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
1,1,1-Trichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
1,1,2-Trichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
Trichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0088	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
1,2,3-Trichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
1,2,4-Trimethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
1,3,5-Trimethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
Vinyl Chloride	ND	0.0088	mg/Kg dry	1	L-04	SW-846 8260C	4/1/19	4/1/19 15:43	MFF
m+p Xylene	ND	0.0035	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF
o-Xylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 15:43	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	96.9	70-130	4/1/19 15:43
Toluene-d8	97.4	70-130	4/1/19 15:43
4-Bromofluorobenzene	96.6	70-130	4/1/19 15:43

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-108 (0-5)

Sampled: 3/27/2019 13:15

Sample ID: 19C1572-02

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
Acenaphthylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
Acetophenone	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
Aniline	ND	0.36	mg/Kg dry	1	V-34	SW-846 8270D	4/2/19	4/3/19 16:09	IMR
Anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
Benzo(a)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
Benzo(a)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
Benzo(b)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
Benzo(g,h,i)perylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
Benzo(k)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
Bis(2-chloroethoxy)methane	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
Bis(2-chloroethyl)ether	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
Bis(2-chloroisopropyl)ether	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
4-Bromophenylphenylether	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
Butylbenzylphthalate	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
4-Chloroaniline	ND	0.69	mg/Kg dry	1	V-34	SW-846 8270D	4/2/19	4/3/19 16:09	IMR
2-Chloronaphthalene	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
2-Chlorophenol	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
Chrysene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
Dibenz(a,h)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
Dibenzofuran	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
Di-n-butylphthalate	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
1,2-Dichlorobenzene	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
1,3-Dichlorobenzene	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
1,4-Dichlorobenzene	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
3,3-Dichlorobenzidine	ND	0.18	mg/Kg dry	1	V-34	SW-846 8270D	4/2/19	4/3/19 16:09	IMR
2,4-Dichlorophenol	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
Diethylphthalate	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
2,4-Dimethylphenol	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
Dimethylphthalate	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
2,4-Dinitrophenol	ND	0.69	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
2,4-Dinitrotoluene	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
2,6-Dinitrotoluene	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
Di-n-octylphthalate	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
Fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
Fluorene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
Hexachlorobenzene	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
Hexachlorobutadiene	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
Hexachloroethane	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
Indeno(1,2,3-cd)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
Isophorone	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
2-Methylnaphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Sampled: 3/27/2019 13:15

Field Sample #: V-108 (0-5)

Sample ID: 19C1572-02

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	0.36	mg/Kg dry	1	V-05	SW-846 8270D	4/2/19	4/3/19 16:09	IMR
3/4-Methylphenol	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
Naphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
Nitrobenzene	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
2-Nitrophenol	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
4-Nitrophenol	ND	0.69	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
Pentachlorophenol	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
Phenanthrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
Phenol	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
Pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
1,2,4-Trichlorobenzene	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
2,4,5-Trichlorophenol	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR
2,4,6-Trichlorophenol	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:09	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	73.4	30-130	
Phenol-d6	82.5	30-130	
Nitrobenzene-d5	83.1	30-130	
2-Fluorobiphenyl	88.6	30-130	
2,4,6-Tribromophenol	97.3	30-130	
p-Terphenyl-d14	111	30-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-108 (0-5)

Sampled: 3/27/2019 13:15

Sample ID: 19C1572-02

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 17:08	JMB
Aroclor-1221 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 17:08	JMB
Aroclor-1232 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 17:08	JMB
Aroclor-1242 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 17:08	JMB
Aroclor-1248 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 17:08	JMB
Aroclor-1254 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 17:08	JMB
Aroclor-1260 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 17:08	JMB
Aroclor-1262 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 17:08	JMB
Aroclor-1268 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 17:08	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		99.1	30-150					4/4/19 17:08	
Decachlorobiphenyl [2]		95.7	30-150					4/4/19 17:08	
Tetrachloro-m-xylene [1]		98.6	30-150					4/4/19 17:08	
Tetrachloro-m-xylene [2]		96.8	30-150					4/4/19 17:08	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Sampled: 3/27/2019 13:15

Field Sample #: V-108 (0-5)

Sample ID: 19C1572-02

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	ND	8.8	mg/Kg dry	1		SW-846 8100 Modified	4/2/19	4/4/19 10:44	RMW
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
2-Fluorobiphenyl	75.9		40-140					4/4/19 10:44	



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Sampled: 3/27/2019 13:15

Field Sample #: V-108 (0-5)

Sample ID: 19C1572-02

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.7	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 16:41	MJH
Arsenic	5.6	1.7	mg/Kg dry	1		SW-846 6010D	4/3/19	4/5/19 13:05	EJB
Barium	30	1.7	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 16:41	MJH
Beryllium	0.28	0.17	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 16:41	MJH
Cadmium	0.19	0.17	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 16:41	MJH
Chromium	12	0.35	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 16:41	MJH
Lead	5.2	0.52	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 16:41	MJH
Mercury	ND	0.026	mg/Kg dry	1		SW-846 7471B	4/2/19	4/3/19 12:59	TBC
Nickel	9.4	0.35	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 16:41	MJH
Selenium	ND	3.5	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 16:41	MJH
Silver	0.41	0.35	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 16:41	MJH
Thallium	ND	1.7	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 22:37	EJB
Vanadium	17	0.69	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 16:41	MJH
Zinc	25	0.69	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 16:41	MJH

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-108 (0-5)

Sampled: 3/27/2019 13:15

Sample ID: 19C1572-02

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	93.8		% Wt	1		SM 2540G	4/3/19	4/4/19 0:59	AVF
Ignitability	Absent		present/absent	1		SW-846 1030	4/2/19	4/2/19 19:15	DJM
pH @21.9°C	8.2		pH Units	1	H-03	SW-846 9045C	3/30/19	3/30/19 15:04	AIA
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	3/30/19	3/31/19 10:20	KMV
Reactive Sulfide	ND	20	mg/L	1		SW-846 9030A	3/30/19	3/31/19 9:50	KMV
Specific conductance	5.7	2.0	µmhos/cm	1		SM21-22 2510B Modified	3/31/19	3/31/19 11:45	KMV

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-109 (5-10)

Sampled: 3/27/2019 13:25

Sample ID: 19C1572-03

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.15	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
Benzene	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
Bromobenzene	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
Bromochloromethane	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
Bromodichloromethane	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
Bromoform	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
Bromomethane	ND	0.015	mg/Kg dry	1	V-34	SW-846 8260C	4/1/19	4/1/19 16:08	MFF
2-Butanone (MEK)	ND	0.059	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
n-Butylbenzene	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
sec-Butylbenzene	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
tert-Butylbenzene	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
Carbon Disulfide	ND	0.0089	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
Carbon Tetrachloride	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
Chlorobenzene	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
Chlorodibromomethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
Chloroethane	ND	0.015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
Chloroform	ND	0.0059	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
Chloromethane	ND	0.015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
2-Chlorotoluene	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
4-Chlorotoluene	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
1,2-Dibromoethane (EDB)	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
Dibromomethane	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
1,2-Dichlorobenzene	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
1,3-Dichlorobenzene	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
1,4-Dichlorobenzene	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
1,1-Dichloroethane	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
1,2-Dichloroethane	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
1,1-Dichloroethylene	ND	0.0059	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
cis-1,2-Dichloroethylene	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
trans-1,2-Dichloroethylene	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
1,2-Dichloropropane	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
1,3-Dichloropropane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
2,2-Dichloropropane	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
1,1-Dichloropropene	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
cis-1,3-Dichloropropene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
trans-1,3-Dichloropropene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
Diethyl Ether	ND	0.015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
Diisopropyl Ether (DIPE)	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
1,4-Dioxane	ND	0.15	mg/Kg dry	1	V-16	SW-846 8260C	4/1/19	4/1/19 16:08	MFF
Ethylbenzene	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-109 (5-10)

Sampled: 3/27/2019 13:25

Sample ID: 19C1572-03

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
2-Hexanone (MBK)	ND	0.030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
Isopropylbenzene (Cumene)	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0059	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
Methylene Chloride	ND	0.015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
Naphthalene	ND	0.0059	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
n-Propylbenzene	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
Styrene	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
1,1,1,2-Tetrachloroethane	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
1,1,2,2-Tetrachloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
Tetrachloroethylene	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
Tetrahydrofuran	ND	0.015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
Toluene	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
1,2,3-Trichlorobenzene	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
1,2,4-Trichlorobenzene	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
1,1,1-Trichloroethane	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
1,1,2-Trichloroethane	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
Trichloroethylene	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
Trichlorofluoromethane (Freon 11)	ND	0.015	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
1,2,3-Trichloropropane	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
1,2,4-Trimethylbenzene	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
1,3,5-Trimethylbenzene	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
Vinyl Chloride	ND	0.015	mg/Kg dry	1	L-04	SW-846 8260C	4/1/19	4/1/19 16:08	MFF
m+p Xylene	ND	0.0059	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF
o-Xylene	ND	0.0030	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:08	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	95.9	70-130	4/1/19 16:08
Toluene-d8	96.4	70-130	4/1/19 16:08
4-Bromofluorobenzene	96.0	70-130	4/1/19 16:08

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-109 (5-10)

Sampled: 3/27/2019 13:25

Sample ID: 19C1572-03

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
Acenaphthylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
Acetophenone	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
Aniline	ND	0.36	mg/Kg dry	1	V-34	SW-846 8270D	4/2/19	4/3/19 16:31	IMR
Anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
Benzo(a)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
Benzo(a)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
Benzo(b)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
Benzo(g,h,i)perylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
Benzo(k)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
Bis(2-chloroethoxy)methane	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
Bis(2-chloroethyl)ether	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
Bis(2-chloroisopropyl)ether	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
4-Bromophenylphenylether	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
Butylbenzylphthalate	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
4-Chloroaniline	ND	0.69	mg/Kg dry	1	V-34	SW-846 8270D	4/2/19	4/3/19 16:31	IMR
2-Chloronaphthalene	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
2-Chlorophenol	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
Chrysene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
Dibenz(a,h)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
Dibenzofuran	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
Di-n-butylphthalate	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
1,2-Dichlorobenzene	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
1,3-Dichlorobenzene	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
1,4-Dichlorobenzene	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
3,3-Dichlorobenzidine	ND	0.18	mg/Kg dry	1	V-34	SW-846 8270D	4/2/19	4/3/19 16:31	IMR
2,4-Dichlorophenol	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
Diethylphthalate	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
2,4-Dimethylphenol	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
Dimethylphthalate	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
2,4-Dinitrophenol	ND	0.69	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
2,4-Dinitrotoluene	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
2,6-Dinitrotoluene	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
Di-n-octylphthalate	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
Fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
Fluorene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
Hexachlorobenzene	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
Hexachlorobutadiene	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
Hexachloroethane	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
Indeno(1,2,3-cd)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
Isophorone	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
2-Methylnaphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-109 (5-10)

Sampled: 3/27/2019 13:25

Sample ID: 19C1572-03

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	0.36	mg/Kg dry	1	V-05	SW-846 8270D	4/2/19	4/3/19 16:31	IMR
3/4-Methylphenol	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
Naphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
Nitrobenzene	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
2-Nitrophenol	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
4-Nitrophenol	ND	0.69	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
Pentachlorophenol	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
Phenanthrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
Phenol	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
Pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
1,2,4-Trichlorobenzene	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
2,4,5-Trichlorophenol	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR
2,4,6-Trichlorophenol	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:31	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	76.2	30-130	
Phenol-d6	83.9	30-130	
Nitrobenzene-d5	86.0	30-130	
2-Fluorobiphenyl	89.7	30-130	
2,4,6-Tribromophenol	96.2	30-130	
p-Terphenyl-d14	113	30-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-109 (5-10)

Sampled: 3/27/2019 13:25

Sample ID: 19C1572-03

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 17:20	JMB
Aroclor-1221 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 17:20	JMB
Aroclor-1232 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 17:20	JMB
Aroclor-1242 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 17:20	JMB
Aroclor-1248 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 17:20	JMB
Aroclor-1254 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 17:20	JMB
Aroclor-1260 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 17:20	JMB
Aroclor-1262 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 17:20	JMB
Aroclor-1268 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 17:20	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		101	30-150					4/4/19 17:20	
Decachlorobiphenyl [2]		98.1	30-150					4/4/19 17:20	
Tetrachloro-m-xylene [1]		92.0	30-150					4/4/19 17:20	
Tetrachloro-m-xylene [2]		90.1	30-150					4/4/19 17:20	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Sampled: 3/27/2019 13:25

Field Sample #: V-109 (5-10)

Sample ID: 19C1572-03

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	ND	8.7	mg/Kg dry	1		SW-846 8100 Modified	4/2/19	4/4/19 8:34	RMW
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
2-Fluorobiphenyl	73.6		40-140					4/4/19 8:34	



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-109 (5-10)

Sampled: 3/27/2019 13:25

Sample ID: 19C1572-03

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.8	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 16:47	MJH
Arsenic	6.5	1.8	mg/Kg dry	1		SW-846 6010D	4/3/19	4/5/19 13:10	EJB
Barium	33	1.8	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 16:47	MJH
Beryllium	0.28	0.18	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 16:47	MJH
Cadmium	0.21	0.18	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 16:47	MJH
Chromium	12	0.35	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 16:47	MJH
Lead	5.0	0.53	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 16:47	MJH
Mercury	ND	0.026	mg/Kg dry	1		SW-846 7471B	4/2/19	4/3/19 13:01	TBC
Nickel	9.6	0.35	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 16:47	MJH
Selenium	ND	3.5	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 16:47	MJH
Silver	0.37	0.35	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 16:47	MJH
Thallium	ND	1.8	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 22:43	EJB
Vanadium	17	0.71	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 16:47	MJH
Zinc	23	0.71	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 16:47	MJH

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-109 (5-10)

Sampled: 3/27/2019 13:25

Sample ID: 19C1572-03

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	94.2		% Wt	1		SM 2540G	4/3/19	4/4/19 0:59	AVF
Ignitability	Absent		present/absent	1		SW-846 1030	4/2/19	4/2/19 19:15	DJM
pH @22.1°C	8.1		pH Units	1	H-03	SW-846 9045C	3/30/19	3/30/19 15:04	AIA
Reactive Cyanide	ND	4.0	mg/Kg	1		SW-846 9014	3/30/19	3/31/19 10:20	KMV
Reactive Sulfide	ND	20	mg/L	1		SW-846 9030A	3/30/19	3/31/19 9:50	KMV
Specific conductance	5.8	2.0	µmhos/cm	1		SM21-22 2510B Modified	3/31/19	3/31/19 11:45	KMV

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-110 (5-10)

Sampled: 3/27/2019 13:35

Sample ID: 19C1572-04

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.11	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.0011	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
Benzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
Bromobenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
Bromochloromethane	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
Bromodichloromethane	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
Bromoform	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
Bromomethane	ND	0.011	mg/Kg dry	1	V-34	SW-846 8260C	4/1/19	4/1/19 16:32	MFF
2-Butanone (MEK)	ND	0.046	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
n-Butylbenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
sec-Butylbenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
tert-Butylbenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.0011	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
Carbon Disulfide	ND	0.0068	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
Carbon Tetrachloride	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
Chlorobenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
Chlorodibromomethane	ND	0.0011	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
Chloroethane	ND	0.011	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
Chloroform	ND	0.0046	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
Chloromethane	ND	0.011	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
2-Chlorotoluene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
4-Chlorotoluene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
1,2-Dibromoethane (EDB)	ND	0.0011	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
Dibromomethane	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
1,2-Dichlorobenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
1,3-Dichlorobenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
1,4-Dichlorobenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.011	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
1,1-Dichloroethane	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
1,2-Dichloroethane	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
1,1-Dichloroethylene	ND	0.0046	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
cis-1,2-Dichloroethylene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
trans-1,2-Dichloroethylene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
1,2-Dichloropropane	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
1,3-Dichloropropane	ND	0.0011	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
2,2-Dichloropropane	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
1,1-Dichloropropene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
cis-1,3-Dichloropropene	ND	0.0011	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
trans-1,3-Dichloropropene	ND	0.0011	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
Diethyl Ether	ND	0.011	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
Diisopropyl Ether (DIPE)	ND	0.0011	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
1,4-Dioxane	ND	0.11	mg/Kg dry	1	V-16	SW-846 8260C	4/1/19	4/1/19 16:32	MFF
Ethylbenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-110 (5-10)

Sampled: 3/27/2019 13:35

Sample ID: 19C1572-04

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
2-Hexanone (MBK)	ND	0.023	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
Isopropylbenzene (Cumene)	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0046	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
Methylene Chloride	ND	0.011	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.023	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
Naphthalene	ND	0.0046	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
n-Propylbenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
Styrene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
1,1,1,2-Tetrachloroethane	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
1,1,1,2,2-Tetrachloroethane	ND	0.0011	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
Tetrachloroethylene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
Tetrahydrofuran	ND	0.011	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
Toluene	0.0045	0.0023	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
1,2,3-Trichlorobenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
1,2,4-Trichlorobenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
1,1,1-Trichloroethane	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
1,1,2-Trichloroethane	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
Trichloroethylene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
Trichlorofluoromethane (Freon 11)	ND	0.011	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
1,2,3-Trichloropropane	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
1,2,4-Trimethylbenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
1,3,5-Trimethylbenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
Vinyl Chloride	ND	0.011	mg/Kg dry	1	L-04	SW-846 8260C	4/1/19	4/1/19 16:32	MFF
m+p Xylene	ND	0.0046	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF
o-Xylene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 16:32	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	95.8	70-130	
Toluene-d8	96.5	70-130	
4-Bromofluorobenzene	96.0	70-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-110 (5-10)

Sampled: 3/27/2019 13:35

Sample ID: 19C1572-04

Sample Matrix: Soil

Semivolatle Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
Acenaphthylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
Acetophenone	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
Aniline	ND	0.35	mg/Kg dry	1	V-34	SW-846 8270D	4/2/19	4/3/19 16:54	IMR
Anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
Benzo(a)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
Benzo(a)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
Benzo(b)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
Benzo(g,h,i)perylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
Benzo(k)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
Bis(2-chloroethoxy)methane	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
Bis(2-chloroethyl)ether	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
Bis(2-chloroisopropyl)ether	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
4-Bromophenylphenylether	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
Butylbenzylphthalate	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
4-Chloroaniline	ND	0.68	mg/Kg dry	1	V-34	SW-846 8270D	4/2/19	4/3/19 16:54	IMR
2-Chloronaphthalene	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
2-Chlorophenol	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
Chrysene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
Dibenz(a,h)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
Dibenzofuran	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
Di-n-butylphthalate	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
1,2-Dichlorobenzene	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
1,3-Dichlorobenzene	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
1,4-Dichlorobenzene	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
3,3-Dichlorobenzidine	ND	0.18	mg/Kg dry	1	V-34	SW-846 8270D	4/2/19	4/3/19 16:54	IMR
2,4-Dichlorophenol	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
Diethylphthalate	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
2,4-Dimethylphenol	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
Dimethylphthalate	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
2,4-Dinitrophenol	ND	0.68	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
2,4-Dinitrotoluene	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
2,6-Dinitrotoluene	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
Di-n-octylphthalate	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
Fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
Fluorene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
Hexachlorobenzene	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
Hexachlorobutadiene	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
Hexachloroethane	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
Indeno(1,2,3-cd)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
Isophorone	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
2-Methylnaphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-110 (5-10)

Sampled: 3/27/2019 13:35

Sample ID: 19C1572-04

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	0.35	mg/Kg dry	1	V-05	SW-846 8270D	4/2/19	4/3/19 16:54	IMR
3/4-Methylphenol	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
Naphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
Nitrobenzene	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
2-Nitrophenol	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
4-Nitrophenol	ND	0.68	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
Pentachlorophenol	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
Phenanthrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
Phenol	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
Pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
1,2,4-Trichlorobenzene	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
2,4,5-Trichlorophenol	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
2,4,6-Trichlorophenol	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 16:54	IMR
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2-Fluorophenol		75.5	30-130					4/3/19 16:54	
Phenol-d6		86.9	30-130					4/3/19 16:54	
Nitrobenzene-d5		87.7	30-130					4/3/19 16:54	
2-Fluorobiphenyl		93.9	30-130					4/3/19 16:54	
2,4,6-Tribromophenol		99.4	30-130					4/3/19 16:54	
p-Terphenyl-d14		114	30-130					4/3/19 16:54	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-110 (5-10)

Sampled: 3/27/2019 13:35

Sample ID: 19C1572-04

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 17:33	JMB
Aroclor-1221 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 17:33	JMB
Aroclor-1232 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 17:33	JMB
Aroclor-1242 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 17:33	JMB
Aroclor-1248 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 17:33	JMB
Aroclor-1254 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 17:33	JMB
Aroclor-1260 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 17:33	JMB
Aroclor-1262 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 17:33	JMB
Aroclor-1268 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 17:33	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		98.1	30-150					4/4/19 17:33	
Decachlorobiphenyl [2]		95.7	30-150					4/4/19 17:33	
Tetrachloro-m-xylene [1]		94.5	30-150					4/4/19 17:33	
Tetrachloro-m-xylene [2]		92.4	30-150					4/4/19 17:33	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Sampled: 3/27/2019 13:35

Field Sample #: V-110 (5-10)

Sample ID: 19C1572-04

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	11	8.6	mg/Kg dry	1		SW-846 8100 Modified	4/2/19	4/4/19 8:55	RMW
<b>Surrogates</b>		<b>% Recovery</b>	<b>Recovery Limits</b>		<b>Flag/Qual</b>				
2-Fluorobiphenyl		74.3	40-140					4/4/19 8:55	



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Sampled: 3/27/2019 13:35

Field Sample #: V-110 (5-10)

Sample ID: 19C1572-04

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.7	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 16:53	MJH
Arsenic	6.4	1.7	mg/Kg dry	1		SW-846 6010D	4/3/19	4/5/19 13:15	EJB
Barium	26	1.7	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 16:53	MJH
Beryllium	0.26	0.17	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 16:53	MJH
Cadmium	0.23	0.17	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 16:53	MJH
Chromium	33	0.35	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 16:53	MJH
Lead	3.9	0.52	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 16:53	MJH
Mercury	ND	0.028	mg/Kg dry	1		SW-846 7471B	4/2/19	4/3/19 13:03	TBC
Nickel	11	0.35	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 16:53	MJH
Selenium	ND	3.5	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 16:53	MJH
Silver	ND	0.35	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 16:53	MJH
Thallium	ND	1.7	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 22:50	EJB
Vanadium	17	0.69	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 16:53	MJH
Zinc	24	0.69	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 16:53	MJH

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-110 (5-10)

Sampled: 3/27/2019 13:35

Sample ID: 19C1572-04

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	94.8		% Wt	1		SM 2540G	4/3/19	4/4/19 0:59	AVF
Ignitability	Absent		present/absent	1		SW-846 1030	4/2/19	4/2/19 19:15	DJM
pH @22.2°C	8.5		pH Units	1	H-03	SW-846 9045C	3/30/19	3/30/19 15:04	AIA
Reactive Cyanide	ND	4.0	mg/Kg	1		SW-846 9014	3/30/19	3/31/19 10:20	KMV
Reactive Sulfide	ND	20	mg/L	1		SW-846 9030A	3/30/19	3/31/19 9:50	KMV
Specific conductance	5.3	2.0	µmhos/cm	1		SM21-22 2510B Modified	3/31/19	3/31/19 11:45	KMV

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-111 (0-10)

Sampled: 3/27/2019 13:45

Sample ID: 19C1572-05

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.094	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00094	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
Benzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
Bromobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
Bromochloromethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
Bromodichloromethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
Bromoform	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
Bromomethane	ND	0.0094	mg/Kg dry	1	V-34	SW-846 8260C	4/1/19	4/1/19 20:16	MFF
2-Butanone (MEK)	ND	0.038	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
n-Butylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
sec-Butylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
tert-Butylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00094	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
Carbon Disulfide	ND	0.0057	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
Carbon Tetrachloride	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
Chlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
Chlorodibromomethane	ND	0.00094	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
Chloroethane	ND	0.0094	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
Chloroform	ND	0.0038	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
Chloromethane	ND	0.0094	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
2-Chlorotoluene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
4-Chlorotoluene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
1,2-Dibromoethane (EDB)	ND	0.00094	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
Dibromomethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
1,2-Dichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
1,3-Dichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
1,4-Dichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0094	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
1,1-Dichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
1,2-Dichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
1,1-Dichloroethylene	ND	0.0038	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
cis-1,2-Dichloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
trans-1,2-Dichloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
1,2-Dichloropropane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
1,3-Dichloropropane	ND	0.00094	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
2,2-Dichloropropane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
1,1-Dichloropropene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
cis-1,3-Dichloropropene	ND	0.00094	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
trans-1,3-Dichloropropene	ND	0.00094	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
Diethyl Ether	ND	0.0094	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
Diisopropyl Ether (DIPE)	ND	0.00094	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
1,4-Dioxane	ND	0.094	mg/Kg dry	1	V-16	SW-846 8260C	4/1/19	4/1/19 20:16	MFF
Ethylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-111 (0-10)

Sampled: 3/27/2019 13:45

Sample ID: 19C1572-05

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
2-Hexanone (MBK)	ND	0.019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
Isopropylbenzene (Cumene)	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0038	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
Methylene Chloride	ND	0.0094	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
Naphthalene	ND	0.0038	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
n-Propylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
Styrene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
1,1,1,2-Tetrachloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
1,1,2,2-Tetrachloroethane	ND	0.00094	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
Tetrachloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
Tetrahydrofuran	ND	0.0094	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
Toluene	0.0041	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
1,2,3-Trichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
1,2,4-Trichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
1,1,1-Trichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
1,1,2-Trichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
Trichloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0094	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
1,2,3-Trichloropropane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
1,2,4-Trimethylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
1,3,5-Trimethylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
Vinyl Chloride	ND	0.0094	mg/Kg dry	1	L-04	SW-846 8260C	4/1/19	4/1/19 20:16	MFF
m+p Xylene	ND	0.0038	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF
o-Xylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:16	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	98.7	70-130	4/1/19 20:16
Toluene-d8	97.2	70-130	4/1/19 20:16
4-Bromofluorobenzene	95.0	70-130	4/1/19 20:16

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-111 (0-10)

Sampled: 3/27/2019 13:45

Sample ID: 19C1572-05

Sample Matrix: Soil

Semivolatle Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
Acenaphthylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
Acetophenone	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
Aniline	ND	0.35	mg/Kg dry	1	V-34	SW-846 8270D	4/2/19	4/3/19 17:16	IMR
Anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
Benzo(a)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
Benzo(a)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
Benzo(b)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
Benzo(g,h,i)perylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
Benzo(k)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
Bis(2-chloroethoxy)methane	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
Bis(2-chloroethyl)ether	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
Bis(2-chloroisopropyl)ether	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
4-Bromophenylphenylether	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
Butylbenzylphthalate	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
4-Chloroaniline	ND	0.68	mg/Kg dry	1	V-34	SW-846 8270D	4/2/19	4/3/19 17:16	IMR
2-Chloronaphthalene	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
2-Chlorophenol	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
Chrysene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
Dibenz(a,h)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
Dibenzofuran	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
Di-n-butylphthalate	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
1,2-Dichlorobenzene	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
1,3-Dichlorobenzene	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
1,4-Dichlorobenzene	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
3,3-Dichlorobenzidine	ND	0.18	mg/Kg dry	1	V-34	SW-846 8270D	4/2/19	4/3/19 17:16	IMR
2,4-Dichlorophenol	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
Diethylphthalate	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
2,4-Dimethylphenol	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
Dimethylphthalate	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
2,4-Dinitrophenol	ND	0.68	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
2,4-Dinitrotoluene	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
2,6-Dinitrotoluene	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
Di-n-octylphthalate	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
Fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
Fluorene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
Hexachlorobenzene	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
Hexachlorobutadiene	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
Hexachloroethane	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
Indeno(1,2,3-cd)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
Isophorone	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
2-Methylnaphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-111 (0-10)

Sampled: 3/27/2019 13:45

Sample ID: 19C1572-05

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	0.35	mg/Kg dry	1	V-05	SW-846 8270D	4/2/19	4/3/19 17:16	IMR
3/4-Methylphenol	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
Naphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
Nitrobenzene	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
2-Nitrophenol	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
4-Nitrophenol	ND	0.68	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
Pentachlorophenol	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
Phenanthrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
Phenol	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
Pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
1,2,4-Trichlorobenzene	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
2,4,5-Trichlorophenol	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
2,4,6-Trichlorophenol	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:16	IMR
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2-Fluorophenol		80.7	30-130					4/3/19 17:16	
Phenol-d6		87.7	30-130					4/3/19 17:16	
Nitrobenzene-d5		90.6	30-130					4/3/19 17:16	
2-Fluorobiphenyl		90.5	30-130					4/3/19 17:16	
2,4,6-Tribromophenol		98.3	30-130					4/3/19 17:16	
p-Terphenyl-d14		109	30-130					4/3/19 17:16	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-111 (0-10)

Sampled: 3/27/2019 13:45

Sample ID: 19C1572-05

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.079	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 17:46	JMB
Aroclor-1221 [1]	ND	0.079	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 17:46	JMB
Aroclor-1232 [1]	ND	0.079	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 17:46	JMB
Aroclor-1242 [1]	ND	0.079	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 17:46	JMB
Aroclor-1248 [1]	ND	0.079	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 17:46	JMB
Aroclor-1254 [1]	ND	0.079	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 17:46	JMB
Aroclor-1260 [1]	ND	0.079	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 17:46	JMB
Aroclor-1262 [1]	ND	0.079	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 17:46	JMB
Aroclor-1268 [1]	ND	0.079	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 17:46	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		97.3	30-150					4/4/19 17:46	
Decachlorobiphenyl [2]		92.2	30-150					4/4/19 17:46	
Tetrachloro-m-xylene [1]		101	30-150					4/4/19 17:46	
Tetrachloro-m-xylene [2]		97.5	30-150					4/4/19 17:46	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Sampled: 3/27/2019 13:45

Field Sample #: V-111 (0-10)

Sample ID: 19C1572-05

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	13	8.6	mg/Kg dry	1		SW-846 8100 Modified	4/2/19	4/4/19 10:16	RMW
<b>Surrogates</b>		<b>% Recovery</b>	<b>Recovery Limits</b>		<b>Flag/Qual</b>				
2-Fluorobiphenyl		81.4	40-140					4/4/19 10:16	



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

Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-111 (0-10)

Sampled: 3/27/2019 13:45

Sample ID: 19C1572-05

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.7	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 17:00	MJH
Arsenic	11	1.7	mg/Kg dry	1		SW-846 6010D	4/3/19	4/5/19 13:20	EJB
Barium	32	1.7	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 17:00	MJH
Beryllium	0.31	0.17	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 17:00	MJH
Cadmium	0.37	0.17	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 17:00	MJH
Chromium	11	0.34	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 17:00	MJH
Lead	5.6	0.52	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 17:00	MJH
Mercury	ND	0.026	mg/Kg dry	1		SW-846 7471B	4/2/19	4/3/19 13:04	TBC
Nickel	11	0.34	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 17:00	MJH
Selenium	ND	3.4	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 17:00	MJH
Silver	0.44	0.34	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 17:00	MJH
Thallium	ND	1.7	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 22:56	EJB
Vanadium	17	0.69	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 17:00	MJH
Zinc	25	0.69	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 17:00	MJH

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-111 (0-10)

Sampled: 3/27/2019 13:45

Sample ID: 19C1572-05

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	95.2		% Wt	1		SM 2540G	4/3/19	4/4/19 0:59	AVF
Ignitability	Absent		present/absent	1		SW-846 1030	4/2/19	4/2/19 19:15	DJM
pH @22°C	8.2		pH Units	1	H-03	SW-846 9045C	3/30/19	3/30/19 15:04	AIA
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	3/30/19	3/31/19 10:20	KMV
Reactive Sulfide	ND	20	mg/L	1		SW-846 9030A	3/30/19	3/31/19 9:50	KMV
Specific conductance	6.5	2.0	µmhos/cm	1		SM21-22 2510B Modified	3/31/19	3/31/19 11:45	KMV

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-112 (0-5)

Sampled: 3/27/2019 14:00

Sample ID: 19C1572-06

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.093	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00093	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
Benzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
Bromobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
Bromochloromethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
Bromodichloromethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
Bromoform	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
Bromomethane	ND	0.0093	mg/Kg dry	1	V-34	SW-846 8260C	4/1/19	4/1/19 20:40	MFF
2-Butanone (MEK)	ND	0.037	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
n-Butylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
sec-Butylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
tert-Butylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00093	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
Carbon Disulfide	ND	0.0056	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
Carbon Tetrachloride	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
Chlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
Chlorodibromomethane	ND	0.00093	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
Chloroethane	ND	0.0093	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
Chloroform	ND	0.0037	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
Chloromethane	ND	0.0093	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
2-Chlorotoluene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
4-Chlorotoluene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
1,2-Dibromoethane (EDB)	ND	0.00093	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
Dibromomethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
1,2-Dichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
1,3-Dichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
1,4-Dichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0093	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
1,1-Dichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
1,2-Dichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
1,1-Dichloroethylene	ND	0.0037	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
cis-1,2-Dichloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
trans-1,2-Dichloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
1,2-Dichloropropane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
1,3-Dichloropropane	ND	0.00093	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
2,2-Dichloropropane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
1,1-Dichloropropene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
cis-1,3-Dichloropropene	ND	0.00093	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
trans-1,3-Dichloropropene	ND	0.00093	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
Diethyl Ether	ND	0.0093	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
Diisopropyl Ether (DIPE)	ND	0.00093	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
1,4-Dioxane	ND	0.093	mg/Kg dry	1	V-16	SW-846 8260C	4/1/19	4/1/19 20:40	MFF
Ethylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-112 (0-5)

Sampled: 3/27/2019 14:00

Sample ID: 19C1572-06

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
2-Hexanone (MBK)	ND	0.019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
Isopropylbenzene (Cumene)	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0037	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
Methylene Chloride	ND	0.0093	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
Naphthalene	ND	0.0037	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
n-Propylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
Styrene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
1,1,1,2-Tetrachloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
1,1,1,2,2-Tetrachloroethane	ND	0.00093	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
Tetrachloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
Tetrahydrofuran	ND	0.0093	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
Toluene	0.0030	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
1,2,3-Trichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
1,2,4-Trichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
1,1,1-Trichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
1,1,2-Trichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
Trichloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0093	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
1,2,3-Trichloropropane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
1,2,4-Trimethylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
1,3,5-Trimethylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
Vinyl Chloride	ND	0.0093	mg/Kg dry	1	L-04	SW-846 8260C	4/1/19	4/1/19 20:40	MFF
m+p Xylene	ND	0.0037	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF
o-Xylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 20:40	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	95.7	70-130	
Toluene-d8	96.8	70-130	
4-Bromofluorobenzene	95.6	70-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-112 (0-5)

Sampled: 3/27/2019 14:00

Sample ID: 19C1572-06

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
Acenaphthylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
Acetophenone	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
Aniline	ND	0.35	mg/Kg dry	1	V-34	SW-846 8270D	4/2/19	4/3/19 17:38	IMR
Anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
Benzo(a)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
Benzo(a)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
Benzo(b)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
Benzo(g,h,i)perylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
Benzo(k)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
Bis(2-chloroethoxy)methane	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
Bis(2-chloroethyl)ether	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
Bis(2-chloroisopropyl)ether	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
4-Bromophenylphenylether	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
Butylbenzylphthalate	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
4-Chloroaniline	ND	0.68	mg/Kg dry	1	V-34	SW-846 8270D	4/2/19	4/3/19 17:38	IMR
2-Chloronaphthalene	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
2-Chlorophenol	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
Chrysene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
Dibenz(a,h)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
Dibenzofuran	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
Di-n-butylphthalate	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
1,2-Dichlorobenzene	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
1,3-Dichlorobenzene	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
1,4-Dichlorobenzene	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
3,3-Dichlorobenzidine	ND	0.18	mg/Kg dry	1	V-34	SW-846 8270D	4/2/19	4/3/19 17:38	IMR
2,4-Dichlorophenol	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
Diethylphthalate	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
2,4-Dimethylphenol	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
Dimethylphthalate	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
2,4-Dinitrophenol	ND	0.68	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
2,4-Dinitrotoluene	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
2,6-Dinitrotoluene	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
Di-n-octylphthalate	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
Fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
Fluorene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
Hexachlorobenzene	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
Hexachlorobutadiene	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
Hexachloroethane	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
Indeno(1,2,3-cd)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
Isophorone	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
2-Methylnaphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-112 (0-5)

Sampled: 3/27/2019 14:00

Sample ID: 19C1572-06

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	0.35	mg/Kg dry	1	V-05	SW-846 8270D	4/2/19	4/3/19 17:38	IMR
3/4-Methylphenol	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
Naphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
Nitrobenzene	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
2-Nitrophenol	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
4-Nitrophenol	ND	0.68	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
Pentachlorophenol	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
Phenanthrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
Phenol	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
Pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
1,2,4-Trichlorobenzene	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
2,4,5-Trichlorophenol	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
2,4,6-Trichlorophenol	ND	0.35	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 17:38	IMR
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2-Fluorophenol		65.6	30-130					4/3/19 17:38	
Phenol-d6		73.2	30-130					4/3/19 17:38	
Nitrobenzene-d5		72.2	30-130					4/3/19 17:38	
2-Fluorobiphenyl		78.4	30-130					4/3/19 17:38	
2,4,6-Tribromophenol		92.8	30-130					4/3/19 17:38	
p-Terphenyl-d14		99.9	30-130					4/3/19 17:38	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-112 (0-5)

Sampled: 3/27/2019 14:00

Sample ID: 19C1572-06

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.079	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 17:59	JMB
Aroclor-1221 [1]	ND	0.079	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 17:59	JMB
Aroclor-1232 [1]	ND	0.079	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 17:59	JMB
Aroclor-1242 [1]	ND	0.079	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 17:59	JMB
Aroclor-1248 [1]	ND	0.079	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 17:59	JMB
Aroclor-1254 [1]	ND	0.079	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 17:59	JMB
Aroclor-1260 [1]	ND	0.079	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 17:59	JMB
Aroclor-1262 [1]	ND	0.079	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 17:59	JMB
Aroclor-1268 [1]	ND	0.079	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 17:59	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		97.6	30-150					4/4/19 17:59	
Decachlorobiphenyl [2]		91.5	30-150					4/4/19 17:59	
Tetrachloro-m-xylene [1]		99.7	30-150					4/4/19 17:59	
Tetrachloro-m-xylene [2]		96.5	30-150					4/4/19 17:59	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Sampled: 3/27/2019 14:00

Field Sample #: V-112 (0-5)

Sample ID: 19C1572-06

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	ND	8.6	mg/Kg dry	1		SW-846 8100 Modified	4/2/19	4/4/19 9:15	RMW
<b>Surrogates</b>		<b>% Recovery</b>	<b>Recovery Limits</b>		<b>Flag/Qual</b>				
2-Fluorobiphenyl		73.1	40-140					4/4/19 9:15	



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-112 (0-5)

Sampled: 3/27/2019 14:00

Sample ID: 19C1572-06

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.8	mg/Kg dry	1	MS-07	SW-846 6010D	4/3/19	4/4/19 15:47	MJH
Arsenic	5.0	1.8	mg/Kg dry	1		SW-846 6010D	4/3/19	4/5/19 12:19	EJB
Barium	21	1.8	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 15:47	MJH
Beryllium	0.25	0.18	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 15:47	MJH
Cadmium	ND	0.18	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 15:47	MJH
Chromium	9.1	0.35	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 15:47	MJH
Lead	3.9	0.53	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 15:47	MJH
Mercury	ND	0.027	mg/Kg dry	1		SW-846 7471B	4/2/19	4/3/19 13:06	TBC
Nickel	7.1	0.35	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 15:47	MJH
Selenium	ND	3.5	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 15:47	MJH
Silver	ND	0.35	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 15:47	MJH
Thallium	ND	1.8	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 21:40	EJB
Vanadium	12	0.71	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 15:47	MJH
Zinc	17	0.71	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 15:47	MJH

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-112 (0-5)

Sampled: 3/27/2019 14:00

Sample ID: 19C1572-06

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	94.5		% Wt	1		SM 2540G	4/3/19	4/4/19 0:59	AVF
Ignitability	Absent		present/absent	1		SW-846 1030	4/2/19	4/2/19 19:15	DJM
pH @20.7°C	6.3		pH Units	1	H-03	SW-846 9045C	3/30/19	3/30/19 15:04	AIA
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	3/30/19	3/31/19 10:20	KMV
Reactive Sulfide	ND	20	mg/L	1		SW-846 9030A	3/30/19	3/31/19 9:50	KMV
Specific conductance	4.7	2.0	µmhos/cm	1		SM21-22 2510B Modified	4/1/19	4/1/19 11:30	EC

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-113 (0-5)

Sampled: 3/28/2019 11:00

Sample ID: 19C1572-07

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.089	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00089	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
Benzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
Bromobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
Bromochloromethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
Bromodichloromethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
Bromoform	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
Bromomethane	ND	0.0089	mg/Kg dry	1	V-34	SW-846 8260C	4/1/19	4/1/19 21:04	MFF
2-Butanone (MEK)	ND	0.036	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
n-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
sec-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
tert-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00089	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
Carbon Disulfide	ND	0.0053	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
Carbon Tetrachloride	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
Chlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
Chlorodibromomethane	ND	0.00089	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
Chloroethane	ND	0.0089	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
Chloroform	ND	0.0036	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
Chloromethane	ND	0.0089	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
2-Chlorotoluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
4-Chlorotoluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
1,2-Dibromoethane (EDB)	ND	0.00089	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
Dibromomethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
1,2-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
1,3-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
1,4-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0089	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
1,1-Dichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
1,2-Dichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
1,1-Dichloroethylene	ND	0.0036	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
cis-1,2-Dichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
trans-1,2-Dichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
1,2-Dichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
1,3-Dichloropropane	ND	0.00089	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
2,2-Dichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
1,1-Dichloropropene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
cis-1,3-Dichloropropene	ND	0.00089	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
trans-1,3-Dichloropropene	ND	0.00089	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
Diethyl Ether	ND	0.0089	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
Diisopropyl Ether (DIPE)	ND	0.00089	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
1,4-Dioxane	ND	0.089	mg/Kg dry	1	V-16	SW-846 8260C	4/1/19	4/1/19 21:04	MFF
Ethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-113 (0-5)

Sampled: 3/28/2019 11:00

Sample ID: 19C1572-07

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
2-Hexanone (MBK)	ND	0.018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
Isopropylbenzene (Cumene)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0036	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
Methylene Chloride	ND	0.0089	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
Naphthalene	ND	0.0036	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
n-Propylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
Styrene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
1,1,1,2-Tetrachloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
1,1,1,2,2-Tetrachloroethane	ND	0.00089	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
Tetrachloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
Tetrahydrofuran	ND	0.0089	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
Toluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
1,2,3-Trichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
1,2,4-Trichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
1,1,1-Trichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
1,1,2-Trichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
Trichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0089	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
1,2,3-Trichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
1,2,4-Trimethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
1,3,5-Trimethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
Vinyl Chloride	ND	0.0089	mg/Kg dry	1	L-04	SW-846 8260C	4/1/19	4/1/19 21:04	MFF
m+p Xylene	ND	0.0036	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF
o-Xylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:04	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	96.4	70-130	4/1/19 21:04
Toluene-d8	95.8	70-130	4/1/19 21:04
4-Bromofluorobenzene	94.6	70-130	4/1/19 21:04

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-113 (0-5)

Sampled: 3/28/2019 11:00

Sample ID: 19C1572-07

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
Acenaphthylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
Acetophenone	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
Aniline	ND	0.36	mg/Kg dry	1	V-34	SW-846 8270D	4/2/19	4/3/19 18:00	IMR
Anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
Benzo(a)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
Benzo(a)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
Benzo(b)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
Benzo(g,h,i)perylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
Benzo(k)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
Bis(2-chloroethoxy)methane	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
Bis(2-chloroethyl)ether	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
Bis(2-chloroisopropyl)ether	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
4-Bromophenylphenylether	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
Butylbenzylphthalate	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
4-Chloroaniline	ND	0.71	mg/Kg dry	1	V-34	SW-846 8270D	4/2/19	4/3/19 18:00	IMR
2-Chloronaphthalene	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
2-Chlorophenol	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
Chrysene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
Dibenz(a,h)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
Dibenzofuran	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
Di-n-butylphthalate	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
1,2-Dichlorobenzene	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
1,3-Dichlorobenzene	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
1,4-Dichlorobenzene	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
3,3-Dichlorobenzidine	ND	0.18	mg/Kg dry	1	V-34	SW-846 8270D	4/2/19	4/3/19 18:00	IMR
2,4-Dichlorophenol	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
Diethylphthalate	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
2,4-Dimethylphenol	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
Dimethylphthalate	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
2,4-Dinitrophenol	ND	0.71	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
2,4-Dinitrotoluene	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
2,6-Dinitrotoluene	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
Di-n-octylphthalate	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
Fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
Fluorene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
Hexachlorobenzene	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
Hexachlorobutadiene	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
Hexachloroethane	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
Indeno(1,2,3-cd)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
Isophorone	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
2-Methylnaphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-113 (0-5)

Sampled: 3/28/2019 11:00

Sample ID: 19C1572-07

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	0.36	mg/Kg dry	1	V-05	SW-846 8270D	4/2/19	4/3/19 18:00	IMR
3/4-Methylphenol	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
Naphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
Nitrobenzene	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
2-Nitrophenol	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
4-Nitrophenol	ND	0.71	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
Pentachlorophenol	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
Phenanthrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
Phenol	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
Pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
1,2,4-Trichlorobenzene	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
2,4,5-Trichlorophenol	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
2,4,6-Trichlorophenol	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:00	IMR
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2-Fluorophenol		78.8	30-130					4/3/19 18:00	
Phenol-d6		87.4	30-130					4/3/19 18:00	
Nitrobenzene-d5		87.4	30-130					4/3/19 18:00	
2-Fluorobiphenyl		87.6	30-130					4/3/19 18:00	
2,4,6-Tribromophenol		102	30-130					4/3/19 18:00	
p-Terphenyl-d14		110	30-130					4/3/19 18:00	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-113 (0-5)

Sampled: 3/28/2019 11:00

Sample ID: 19C1572-07

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.080	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 18:12	JMB
Aroclor-1221 [1]	ND	0.080	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 18:12	JMB
Aroclor-1232 [1]	ND	0.080	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 18:12	JMB
Aroclor-1242 [1]	ND	0.080	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 18:12	JMB
Aroclor-1248 [1]	ND	0.080	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 18:12	JMB
Aroclor-1254 [1]	ND	0.080	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 18:12	JMB
Aroclor-1260 [1]	ND	0.080	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 18:12	JMB
Aroclor-1262 [1]	ND	0.080	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 18:12	JMB
Aroclor-1268 [1]	ND	0.080	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 18:12	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		106	30-150					4/4/19 18:12	
Decachlorobiphenyl [2]		101	30-150					4/4/19 18:12	
Tetrachloro-m-xylene [1]		105	30-150					4/4/19 18:12	
Tetrachloro-m-xylene [2]		101	30-150					4/4/19 18:12	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Sampled: 3/28/2019 11:00

Field Sample #: V-113 (0-5)

Sample ID: 19C1572-07

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	ND	8.9	mg/Kg dry	1		SW-846 8100 Modified	4/2/19	4/4/19 9:35	RMW
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
2-Fluorobiphenyl	75.0		40-140					4/4/19 9:35	



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-113 (0-5)

Sampled: 3/28/2019 11:00

Sample ID: 19C1572-07

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.8	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 17:07	MJH
Arsenic	2.8	1.8	mg/Kg dry	1		SW-846 6010D	4/3/19	4/5/19 13:25	EJB
Barium	15	1.8	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 17:07	MJH
Beryllium	ND	0.18	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 17:07	MJH
Cadmium	ND	0.18	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 17:07	MJH
Chromium	11	0.36	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 17:07	MJH
Lead	2.3	0.54	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 17:07	MJH
Mercury	ND	0.026	mg/Kg dry	1		SW-846 7471B	4/2/19	4/3/19 13:07	TBC
Nickel	4.8	0.36	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 17:07	MJH
Selenium	ND	3.6	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 17:07	MJH
Silver	ND	0.36	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 17:07	MJH
Thallium	ND	1.8	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 23:03	EJB
Vanadium	9.6	0.72	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 17:07	MJH
Zinc	11	0.72	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 17:07	MJH

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-113 (0-5)

Sampled: 3/28/2019 11:00

Sample ID: 19C1572-07

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	93.3		% Wt	1		SM 2540G	4/3/19	4/4/19 0:59	AVF
Ignitability	Absent		present/absent	1		SW-846 1030	4/2/19	4/2/19 19:15	DJM
pH @20.4°C	6.5		pH Units	1	H-03	SW-846 9045C	3/30/19	3/30/19 15:04	AIA
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	3/30/19	3/31/19 10:20	KMV
Reactive Sulfide	ND	20	mg/L	1		SW-846 9030A	3/30/19	3/31/19 9:50	KMV
Specific conductance	ND	2.0	µmhos/cm	1		SM21-22 2510B Modified	4/1/19	4/1/19 11:30	EC

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-114 (5-10)

Sampled: 3/28/2019 11:35

Sample ID: 19C1572-08

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.10	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.0010	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
Benzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
Bromobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
Bromochloromethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
Bromodichloromethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
Bromoform	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
Bromomethane	ND	0.010	mg/Kg dry	1	V-34	SW-846 8260C	4/1/19	4/1/19 21:29	MFF
2-Butanone (MEK)	ND	0.042	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
n-Butylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
sec-Butylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
tert-Butylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.0010	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
Carbon Disulfide	ND	0.0062	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
Carbon Tetrachloride	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
Chlorobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
Chlorodibromomethane	ND	0.0010	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
Chloroethane	ND	0.010	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
Chloroform	ND	0.0042	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
Chloromethane	ND	0.010	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
2-Chlorotoluene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
4-Chlorotoluene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
1,2-Dibromoethane (EDB)	ND	0.0010	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
Dibromomethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
1,2-Dichlorobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
1,3-Dichlorobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
1,4-Dichlorobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.010	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
1,1-Dichloroethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
1,2-Dichloroethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
1,1-Dichloroethylene	ND	0.0042	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
cis-1,2-Dichloroethylene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
trans-1,2-Dichloroethylene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
1,2-Dichloropropane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
1,3-Dichloropropane	ND	0.0010	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
2,2-Dichloropropane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
1,1-Dichloropropene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
cis-1,3-Dichloropropene	ND	0.0010	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
trans-1,3-Dichloropropene	ND	0.0010	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
Diethyl Ether	ND	0.010	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
Diisopropyl Ether (DIPE)	ND	0.0010	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
1,4-Dioxane	ND	0.10	mg/Kg dry	1	V-16	SW-846 8260C	4/1/19	4/1/19 21:29	MFF
Ethylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-114 (5-10)

Sampled: 3/28/2019 11:35

Sample ID: 19C1572-08

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
2-Hexanone (MBK)	ND	0.021	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
Isopropylbenzene (Cumene)	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0042	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
Methylene Chloride	ND	0.010	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.021	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
Naphthalene	ND	0.0042	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
n-Propylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
Styrene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
1,1,1,2-Tetrachloroethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
1,1,2,2-Tetrachloroethane	ND	0.0010	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
Tetrachloroethylene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
Tetrahydrofuran	ND	0.010	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
Toluene	0.0068	0.0021	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
1,2,3-Trichlorobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
1,2,4-Trichlorobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
1,1,1-Trichloroethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
1,1,2-Trichloroethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
Trichloroethylene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
Trichlorofluoromethane (Freon 11)	ND	0.010	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
1,2,3-Trichloropropane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
1,2,4-Trimethylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
1,3,5-Trimethylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
Vinyl Chloride	ND	0.010	mg/Kg dry	1	L-04	SW-846 8260C	4/1/19	4/1/19 21:29	MFF
m+p Xylene	ND	0.0042	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF
o-Xylene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	4/1/19	4/1/19 21:29	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	99.1	70-130	4/1/19 21:29
Toluene-d8	96.3	70-130	4/1/19 21:29
4-Bromofluorobenzene	97.4	70-130	4/1/19 21:29

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-114 (5-10)

Sampled: 3/28/2019 11:35

Sample ID: 19C1572-08

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
Acenaphthylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
Acetophenone	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
Aniline	ND	0.36	mg/Kg dry	1	V-34	SW-846 8270D	4/2/19	4/3/19 18:23	IMR
Anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
Benzo(a)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
Benzo(a)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
Benzo(b)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
Benzo(g,h,i)perylene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
Benzo(k)fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
Bis(2-chloroethoxy)methane	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
Bis(2-chloroethyl)ether	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
Bis(2-chloroisopropyl)ether	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
4-Bromophenylphenylether	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
Butylbenzylphthalate	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
4-Chloroaniline	ND	0.69	mg/Kg dry	1	V-34	SW-846 8270D	4/2/19	4/3/19 18:23	IMR
2-Chloronaphthalene	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
2-Chlorophenol	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
Chrysene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
Dibenz(a,h)anthracene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
Dibenzofuran	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
Di-n-butylphthalate	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
1,2-Dichlorobenzene	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
1,3-Dichlorobenzene	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
1,4-Dichlorobenzene	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
3,3-Dichlorobenzidine	ND	0.18	mg/Kg dry	1	V-34	SW-846 8270D	4/2/19	4/3/19 18:23	IMR
2,4-Dichlorophenol	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
Diethylphthalate	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
2,4-Dimethylphenol	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
Dimethylphthalate	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
2,4-Dinitrophenol	ND	0.69	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
2,4-Dinitrotoluene	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
2,6-Dinitrotoluene	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
Di-n-octylphthalate	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
Fluoranthene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
Fluorene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
Hexachlorobenzene	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
Hexachlorobutadiene	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
Hexachloroethane	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
Indeno(1,2,3-cd)pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
Isophorone	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
2-Methylnaphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-114 (5-10)

Sampled: 3/28/2019 11:35

Sample ID: 19C1572-08

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	0.36	mg/Kg dry	1	V-05	SW-846 8270D	4/2/19	4/3/19 18:23	IMR
3/4-Methylphenol	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
Naphthalene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
Nitrobenzene	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
2-Nitrophenol	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
4-Nitrophenol	ND	0.69	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
Pentachlorophenol	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
Phenanthrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
Phenol	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
Pyrene	ND	0.18	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
1,2,4-Trichlorobenzene	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
2,4,5-Trichlorophenol	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR
2,4,6-Trichlorophenol	ND	0.36	mg/Kg dry	1		SW-846 8270D	4/2/19	4/3/19 18:23	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	85.4	30-130	
Phenol-d6	92.8	30-130	
Nitrobenzene-d5	94.9	30-130	
2-Fluorobiphenyl	97.5	30-130	
2,4,6-Tribromophenol	105	30-130	
p-Terphenyl-d14	113	30-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-114 (5-10)

Sampled: 3/28/2019 11:35

Sample ID: 19C1572-08

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 18:25	JMB
Aroclor-1221 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 18:25	JMB
Aroclor-1232 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 18:25	JMB
Aroclor-1242 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 18:25	JMB
Aroclor-1248 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 18:25	JMB
Aroclor-1254 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 18:25	JMB
Aroclor-1260 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 18:25	JMB
Aroclor-1262 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 18:25	JMB
Aroclor-1268 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 18:25	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		108	30-150					4/4/19 18:25	
Decachlorobiphenyl [2]		100	30-150					4/4/19 18:25	
Tetrachloro-m-xylene [1]		104	30-150					4/4/19 18:25	
Tetrachloro-m-xylene [2]		102	30-150					4/4/19 18:25	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Sampled: 3/28/2019 11:35

Field Sample #: V-114 (5-10)

Sample ID: 19C1572-08

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	27	8.7	mg/Kg dry	1		SW-846 8100 Modified	4/2/19	4/4/19 9:55	RMW
<b>Surrogates</b>		<b>% Recovery</b>	<b>Recovery Limits</b>		<b>Flag/Qual</b>				
2-Fluorobiphenyl		76.7	40-140					4/4/19 9:55	



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-114 (5-10)

Sampled: 3/28/2019 11:35

Sample ID: 19C1572-08

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.7	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 17:13	MJH
Arsenic	4.5	1.7	mg/Kg dry	1		SW-846 6010D	4/3/19	4/5/19 13:30	EJB
Barium	31	1.7	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 17:13	MJH
Beryllium	0.26	0.17	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 17:13	MJH
Cadmium	ND	0.17	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 17:13	MJH
Chromium	15	0.34	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 17:13	MJH
Lead	5.8	0.51	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 17:13	MJH
Mercury	ND	0.026	mg/Kg dry	1		SW-846 7471B	4/2/19	4/3/19 13:09	TBC
Nickel	12	0.34	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 17:13	MJH
Selenium	ND	3.4	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 17:13	MJH
Silver	0.57	0.34	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 17:13	MJH
Thallium	ND	1.7	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 23:09	EJB
Vanadium	23	0.68	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 17:13	MJH
Zinc	30	0.68	mg/Kg dry	1		SW-846 6010D	4/3/19	4/4/19 17:13	MJH

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-114 (5-10)

Sampled: 3/28/2019 11:35

Sample ID: 19C1572-08

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	95.4		% Wt	1		SM 2540G	4/3/19	4/4/19 0:59	AVF
Ignitability	Absent		present/absent	1		SW-846 1030	4/2/19	4/2/19 19:15	DJM
pH @20.3°C	6.4		pH Units	1	H-03	SW-846 9045C	3/30/19	3/30/19 15:04	AIA
Reactive Cyanide	ND	4.0	mg/Kg	1		SW-846 9014	3/30/19	3/31/19 10:20	KMV
Reactive Sulfide	ND	20	mg/L	1		SW-846 9030A	3/30/19	3/31/19 9:50	KMV
Specific conductance	2.1	2.0	µmhos/cm	1		SM21-22 2510B Modified	4/1/19	4/1/19 11:30	EC

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-115 (5-10)

Sampled: 3/28/2019 12:00

Sample ID: 19C1572-09

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 18:37	JMB
Aroclor-1221 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 18:37	JMB
Aroclor-1232 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 18:37	JMB
Aroclor-1242 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 18:37	JMB
Aroclor-1248 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 18:37	JMB
Aroclor-1254 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 18:37	JMB
Aroclor-1260 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 18:37	JMB
Aroclor-1262 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 18:37	JMB
Aroclor-1268 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 18:37	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		107	30-150					4/4/19 18:37	
Decachlorobiphenyl [2]		97.0	30-150					4/4/19 18:37	
Tetrachloro-m-xylene [1]		97.7	30-150					4/4/19 18:37	
Tetrachloro-m-xylene [2]		95.1	30-150					4/4/19 18:37	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Sampled: 3/28/2019 12:00

Field Sample #: V-115 (5-10)

Sample ID: 19C1572-09

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	94.6		% Wt	1		SM 2540G	4/3/19	4/4/19 1:00	AVF

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Field Sample #: V-116 (0-5)

Sampled: 3/28/2019 12:30

Sample ID: 19C1572-10

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 18:50	JMB
Aroclor-1221 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 18:50	JMB
Aroclor-1232 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 18:50	JMB
Aroclor-1242 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 18:50	JMB
Aroclor-1248 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 18:50	JMB
Aroclor-1254 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 18:50	JMB
Aroclor-1260 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 18:50	JMB
Aroclor-1262 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 18:50	JMB
Aroclor-1268 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	4/2/19	4/4/19 18:50	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		103	30-150					4/4/19 18:50	
Decachlorobiphenyl [2]		97.4	30-150					4/4/19 18:50	
Tetrachloro-m-xylene [1]		106	30-150					4/4/19 18:50	
Tetrachloro-m-xylene [2]		103	30-150					4/4/19 18:50	

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19C1572

Date Received: 3/29/2019

Sampled: 3/28/2019 12:30

Field Sample #: V-116 (0-5)

Sample ID: 19C1572-10

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	94.6		% Wt	1		SM 2540G	4/3/19	4/4/19 1:00	AVF

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

**Sample Extraction Data**

**Prep Method: % Solids-SM 2540G**

Lab Number [Field ID]	Batch	Date
19C1572-01 [V-107 (5-10)]	B227324	04/03/19
19C1572-02 [V-108 (0-5)]	B227324	04/03/19
19C1572-03 [V-109 (5-10)]	B227324	04/03/19
19C1572-04 [V-110 (5-10)]	B227324	04/03/19
19C1572-05 [V-111 (0-10)]	B227324	04/03/19
19C1572-06 [V-112 (0-5)]	B227324	04/03/19
19C1572-07 [V-113 (0-5)]	B227324	04/03/19
19C1572-08 [V-114 (5-10)]	B227324	04/03/19
19C1572-09 [V-115 (5-10)]	B227324	04/03/19
19C1572-10 [V-116 (0-5)]	B227324	04/03/19

**SM21-22 2510B Modified**

Lab Number [Field ID]	Batch	Initial [g]	Date
19C1572-01 [V-107 (5-10)]	B227054	1.00	03/31/19
19C1572-02 [V-108 (0-5)]	B227054	1.00	03/31/19
19C1572-03 [V-109 (5-10)]	B227054	1.00	03/31/19
19C1572-04 [V-110 (5-10)]	B227054	1.00	03/31/19
19C1572-05 [V-111 (0-10)]	B227054	1.00	03/31/19

**SM21-22 2510B Modified**

Lab Number [Field ID]	Batch	Initial [g]	Date
19C1572-06 [V-112 (0-5)]	B227087	1.00	04/01/19
19C1572-07 [V-113 (0-5)]	B227087	1.00	04/01/19
19C1572-08 [V-114 (5-10)]	B227087	1.00	04/01/19

**SW-846 1030**

Lab Number [Field ID]	Batch	Initial [g]	Date
19C1572-01 [V-107 (5-10)]	B227278	50.0	04/02/19
19C1572-02 [V-108 (0-5)]	B227278	50.0	04/02/19
19C1572-03 [V-109 (5-10)]	B227278	50.0	04/02/19
19C1572-04 [V-110 (5-10)]	B227278	50.0	04/02/19
19C1572-05 [V-111 (0-10)]	B227278	50.0	04/02/19
19C1572-06 [V-112 (0-5)]	B227278	50.0	04/02/19
19C1572-07 [V-113 (0-5)]	B227278	50.0	04/02/19
19C1572-08 [V-114 (5-10)]	B227278	50.0	04/02/19

**Prep Method: SW-846 3050B-SW-846 6010D**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C1572-01 [V-107 (5-10)]	B227367	1.52	50.0	04/03/19
19C1572-02 [V-108 (0-5)]	B227367	1.54	50.0	04/03/19
19C1572-03 [V-109 (5-10)]	B227367	1.50	50.0	04/03/19
19C1572-04 [V-110 (5-10)]	B227367	1.52	50.0	04/03/19
19C1572-05 [V-111 (0-10)]	B227367	1.53	50.0	04/03/19
19C1572-06 [V-112 (0-5)]	B227367	1.50	50.0	04/03/19
19C1572-07 [V-113 (0-5)]	B227367	1.49	50.0	04/03/19
19C1572-08 [V-114 (5-10)]	B227367	1.53	50.0	04/03/19

**Sample Extraction Data**

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C1572-01 [V-107 (5-10)]	B227094	0.619	50.0	04/02/19
19C1572-02 [V-108 (0-5)]	B227094	0.606	50.0	04/02/19
19C1572-03 [V-109 (5-10)]	B227094	0.608	50.0	04/02/19
19C1572-04 [V-110 (5-10)]	B227094	0.574	50.0	04/02/19
19C1572-05 [V-111 (0-10)]	B227094	0.598	50.0	04/02/19
19C1572-06 [V-112 (0-5)]	B227094	0.594	50.0	04/02/19
19C1572-07 [V-113 (0-5)]	B227094	0.612	50.0	04/02/19
19C1572-08 [V-114 (5-10)]	B227094	0.596	50.0	04/02/19

**Prep Method: SW-846 3540C-SW-846 8082A**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C1572-01 [V-107 (5-10)]	B227240	10.2	10.0	04/02/19
19C1572-02 [V-108 (0-5)]	B227240	10.2	10.0	04/02/19
19C1572-03 [V-109 (5-10)]	B227240	10.3	10.0	04/02/19
19C1572-04 [V-110 (5-10)]	B227240	10.2	10.0	04/02/19
19C1572-05 [V-111 (0-10)]	B227240	10.6	10.0	04/02/19
19C1572-06 [V-112 (0-5)]	B227240	10.7	10.0	04/02/19
19C1572-07 [V-113 (0-5)]	B227240	10.7	10.0	04/02/19
19C1572-08 [V-114 (5-10)]	B227240	10.4	10.0	04/02/19
19C1572-09 [V-115 (5-10)]	B227240	10.3	10.0	04/02/19
19C1572-10 [V-116 (0-5)]	B227240	10.3	10.0	04/02/19

**Prep Method: SW-846 3546-SW-846 8100 Modified**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C1572-01 [V-107 (5-10)]	B227221	30.7	1.00	04/02/19
19C1572-02 [V-108 (0-5)]	B227221	30.4	1.00	04/02/19
19C1572-03 [V-109 (5-10)]	B227221	30.5	1.00	04/02/19
19C1572-04 [V-110 (5-10)]	B227221	30.7	1.00	04/02/19
19C1572-05 [V-111 (0-10)]	B227221	30.4	1.00	04/02/19
19C1572-06 [V-112 (0-5)]	B227221	30.6	1.00	04/02/19
19C1572-07 [V-113 (0-5)]	B227221	30.0	1.00	04/02/19
19C1572-08 [V-114 (5-10)]	B227221	30.0	1.00	04/02/19

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C1572-01 [V-107 (5-10)]	B227113	6.78	10.0	04/01/19
19C1572-02 [V-108 (0-5)]	B227113	6.06	10.0	04/01/19
19C1572-03 [V-109 (5-10)]	B227113	3.60	10.0	04/01/19
19C1572-04 [V-110 (5-10)]	B227113	4.62	10.0	04/01/19

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C1572-05 [V-111 (0-10)]	B227135	5.57	10.0	04/01/19
19C1572-06 [V-112 (0-5)]	B227135	5.67	10.0	04/01/19
19C1572-07 [V-113 (0-5)]	B227135	6.01	10.0	04/01/19



**Sample Extraction Data**

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C1572-08 [V-114 (5-10)]	B227135	5.04	10.0	04/01/19

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C1572-01 [V-107 (5-10)]	B227222	30.7	1.00	04/02/19
19C1572-02 [V-108 (0-5)]	B227222	30.4	1.00	04/02/19
19C1572-03 [V-109 (5-10)]	B227222	30.5	1.00	04/02/19
19C1572-04 [V-110 (5-10)]	B227222	30.7	1.00	04/02/19
19C1572-05 [V-111 (0-10)]	B227222	30.4	1.00	04/02/19
19C1572-06 [V-112 (0-5)]	B227222	30.6	1.00	04/02/19
19C1572-07 [V-113 (0-5)]	B227222	30.0	1.00	04/02/19
19C1572-08 [V-114 (5-10)]	B227222	30.0	1.00	04/02/19

**SW-846 9014**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C1572-01 [V-107 (5-10)]	B227022	25.7	250	03/30/19
19C1572-02 [V-108 (0-5)]	B227022	25.4	250	03/30/19
19C1572-03 [V-109 (5-10)]	B227022	25.2	250	03/30/19
19C1572-04 [V-110 (5-10)]	B227022	25.2	250	03/30/19
19C1572-05 [V-111 (0-10)]	B227022	25.4	250	03/30/19
19C1572-06 [V-112 (0-5)]	B227022	25.5	250	03/30/19
19C1572-07 [V-113 (0-5)]	B227022	25.4	250	03/30/19
19C1572-08 [V-114 (5-10)]	B227022	25.2	250	03/30/19

**SW-846 9030A**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
19C1572-01 [V-107 (5-10)]	B227024	25.7	250	03/30/19
19C1572-02 [V-108 (0-5)]	B227024	25.4	250	03/30/19
19C1572-03 [V-109 (5-10)]	B227024	25.2	250	03/30/19
19C1572-04 [V-110 (5-10)]	B227024	25.2	250	03/30/19
19C1572-05 [V-111 (0-10)]	B227024	25.4	250	03/30/19
19C1572-06 [V-112 (0-5)]	B227024	25.5	250	03/30/19
19C1572-07 [V-113 (0-5)]	B227024	25.4	250	03/30/19
19C1572-08 [V-114 (5-10)]	B227024	25.2	250	03/30/19

**SW-846 9045C**

Lab Number [Field ID]	Batch	Initial [g]	Date
19C1572-01 [V-107 (5-10)]	B227052	20.0	03/30/19
19C1572-02 [V-108 (0-5)]	B227052	20.0	03/30/19
19C1572-03 [V-109 (5-10)]	B227052	20.0	03/30/19
19C1572-04 [V-110 (5-10)]	B227052	20.0	03/30/19
19C1572-05 [V-111 (0-10)]	B227052	20.0	03/30/19
19C1572-06 [V-112 (0-5)]	B227052	20.0	03/30/19
19C1572-07 [V-113 (0-5)]	B227052	20.0	03/30/19
19C1572-08 [V-114 (5-10)]	B227052	20.0	03/30/19

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 B227113 - SW-846 5035

Blank (B227113-BLK1)

Prepared & Analyzed: 04/01/19

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							
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							
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 B227113 - SW-846 5035

Blank (B227113-BLK1)

Prepared & Analyzed: 04/01/19

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							L-04
m+p Xylene	ND	0.0040	mg/Kg wet							
o-Xylene	ND	0.0020	mg/Kg wet							
Surrogate: 1,2-Dichloroethane-d4	0.0475		mg/Kg wet	0.0500		95.0	70-130			
Surrogate: Toluene-d8	0.0483		mg/Kg wet	0.0500		96.7	70-130			
Surrogate: 4-Bromofluorobenzene	0.0480		mg/Kg wet	0.0500		95.9	70-130			

LCS (B227113-BS1)

Prepared & Analyzed: 04/01/19

Acetone	0.268	0.10	mg/Kg wet	0.200		134	40-160			L-14 †
tert-Amyl Methyl Ether (TAME)	0.0197	0.0010	mg/Kg wet	0.0200		98.4	70-130			
Benzene	0.0165	0.0020	mg/Kg wet	0.0200		82.4	70-130			
Bromobenzene	0.0201	0.0020	mg/Kg wet	0.0200		101	70-130			
Bromochloromethane	0.0176	0.0020	mg/Kg wet	0.0200		87.8	70-130			
Bromodichloromethane	0.0186	0.0020	mg/Kg wet	0.0200		93.0	70-130			
Bromoform	0.0231	0.0020	mg/Kg wet	0.0200		116	70-130			V-20
Bromomethane	0.0114	0.010	mg/Kg wet	0.0200		56.8	40-160			L-14, V-34 †
2-Butanone (MEK)	0.222	0.040	mg/Kg wet	0.200		111	40-160			†
n-Butylbenzene	0.0211	0.0020	mg/Kg wet	0.0200		105	70-130			
sec-Butylbenzene	0.0216	0.0020	mg/Kg wet	0.0200		108	70-130			
tert-Butylbenzene	0.0212	0.0020	mg/Kg wet	0.0200		106	70-130			
tert-Butyl Ethyl Ether (TBEE)	0.0188	0.0010	mg/Kg wet	0.0200		93.8	70-130			
Carbon Disulfide	0.0178	0.0060	mg/Kg wet	0.0200		89.2	70-130			
Carbon Tetrachloride	0.0181	0.0020	mg/Kg wet	0.0200		90.6	70-130			
Chlorobenzene	0.0201	0.0020	mg/Kg wet	0.0200		100	70-130			
Chlorodibromomethane	0.0205	0.0010	mg/Kg wet	0.0200		103	70-130			
Chloroethane	0.0182	0.010	mg/Kg wet	0.0200		91.2	70-130			
Chloroform	0.0169	0.0040	mg/Kg wet	0.0200		84.7	70-130			
Chloromethane	0.0115	0.010	mg/Kg wet	0.0200		57.3	40-160			L-14 †
2-Chlorotoluene	0.0201	0.0020	mg/Kg wet	0.0200		101	70-130			
4-Chlorotoluene	0.0201	0.0020	mg/Kg wet	0.0200		101	70-130			
1,2-Dibromo-3-chloropropane (DBCP)	0.0222	0.0020	mg/Kg wet	0.0200		111	70-130			
1,2-Dibromoethane (EDB)	0.0188	0.0010	mg/Kg wet	0.0200		94.2	70-130			
Dibromomethane	0.0172	0.0020	mg/Kg wet	0.0200		85.8	70-130			
1,2-Dichlorobenzene	0.0211	0.0020	mg/Kg wet	0.0200		105	70-130			
1,3-Dichlorobenzene	0.0214	0.0020	mg/Kg wet	0.0200		107	70-130			
1,4-Dichlorobenzene	0.0200	0.0020	mg/Kg wet	0.0200		100	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
<b>Batch B227113 - SW-846 5035</b>										
<b>LCS (B227113-BS1)</b>										
Prepared & Analyzed: 04/01/19										
Dichlorodifluoromethane (Freon 12)	0.0104	0.010	mg/Kg wet	0.0200		52.2	40-160			L-14 †
1,1-Dichloroethane	0.0173	0.0020	mg/Kg wet	0.0200		86.3	70-130			
1,2-Dichloroethane	0.0176	0.0020	mg/Kg wet	0.0200		88.2	70-130			
1,1-Dichloroethylene	0.0172	0.0040	mg/Kg wet	0.0200		86.2	70-130			
cis-1,2-Dichloroethylene	0.0173	0.0020	mg/Kg wet	0.0200		86.3	70-130			
trans-1,2-Dichloroethylene	0.0173	0.0020	mg/Kg wet	0.0200		86.4	70-130			
1,2-Dichloropropane	0.0180	0.0020	mg/Kg wet	0.0200		90.1	70-130			
1,3-Dichloropropane	0.0176	0.0010	mg/Kg wet	0.0200		88.3	70-130			
2,2-Dichloropropane	0.0184	0.0020	mg/Kg wet	0.0200		92.1	70-130			
1,1-Dichloropropene	0.0171	0.0020	mg/Kg wet	0.0200		85.6	70-130			
cis-1,3-Dichloropropene	0.0190	0.0010	mg/Kg wet	0.0200		94.9	70-130			
trans-1,3-Dichloropropene	0.0197	0.0010	mg/Kg wet	0.0200		98.4	70-130			
Diethyl Ether	0.0174	0.010	mg/Kg wet	0.0200		87.2	70-130			
Diisopropyl Ether (DIPE)	0.0178	0.0010	mg/Kg wet	0.0200		89.1	70-130			
1,4-Dioxane	0.196	0.10	mg/Kg wet	0.200		98.1	40-160			V-16 †
Ethylbenzene	0.0199	0.0020	mg/Kg wet	0.0200		99.5	70-130			
Hexachlorobutadiene	0.0231	0.0020	mg/Kg wet	0.0200		116	70-130			
2-Hexanone (MBK)	0.207	0.020	mg/Kg wet	0.200		104	40-160			†
Isopropylbenzene (Cumene)	0.0209	0.0020	mg/Kg wet	0.0200		105	70-130			
p-Isopropyltoluene (p-Cymene)	0.0214	0.0020	mg/Kg wet	0.0200		107	70-130			
Methyl tert-Butyl Ether (MTBE)	0.0241	0.0040	mg/Kg wet	0.0200		121	70-130			V-20
Methylene Chloride	0.0187	0.010	mg/Kg wet	0.0200		93.6	70-130			
4-Methyl-2-pentanone (MIBK)	0.194	0.020	mg/Kg wet	0.200		97.1	40-160			†
Naphthalene	0.0205	0.0040	mg/Kg wet	0.0200		103	70-130			
n-Propylbenzene	0.0204	0.0020	mg/Kg wet	0.0200		102	70-130			
Styrene	0.0199	0.0020	mg/Kg wet	0.0200		99.5	70-130			
1,1,1,2-Tetrachloroethane	0.0210	0.0020	mg/Kg wet	0.0200		105	70-130			
1,1,2,2-Tetrachloroethane	0.0209	0.0010	mg/Kg wet	0.0200		105	70-130			
Tetrachloroethylene	0.0190	0.0020	mg/Kg wet	0.0200		95.0	70-130			
Tetrahydrofuran	0.0192	0.010	mg/Kg wet	0.0200		95.9	70-130			
Toluene	0.0179	0.0020	mg/Kg wet	0.0200		89.6	70-130			
1,2,3-Trichlorobenzene	0.0212	0.0020	mg/Kg wet	0.0200		106	70-130			
1,2,4-Trichlorobenzene	0.0208	0.0020	mg/Kg wet	0.0200		104	70-130			
1,1,1-Trichloroethane	0.0180	0.0020	mg/Kg wet	0.0200		89.8	70-130			
1,1,2-Trichloroethane	0.0188	0.0020	mg/Kg wet	0.0200		94.2	70-130			
Trichloroethylene	0.0172	0.0020	mg/Kg wet	0.0200		85.8	70-130			
Trichlorofluoromethane (Freon 11)	0.0143	0.010	mg/Kg wet	0.0200		71.4	70-130			
1,2,3-Trichloropropane	0.0192	0.0020	mg/Kg wet	0.0200		96.0	70-130			
1,2,4-Trimethylbenzene	0.0198	0.0020	mg/Kg wet	0.0200		98.9	70-130			
1,3,5-Trimethylbenzene	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130			
<b>Vinyl Chloride</b>	0.0133	0.010	mg/Kg wet	0.0200		<b>66.3</b>	* 70-130			L-04
m+p Xylene	0.0399	0.0040	mg/Kg wet	0.0400		99.7	70-130			
o-Xylene	0.0197	0.0020	mg/Kg wet	0.0200		98.7	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0488		mg/Kg wet	0.0500		97.5	70-130			
Surrogate: Toluene-d8	0.0476		mg/Kg wet	0.0500		95.2	70-130			
Surrogate: 4-Bromofluorobenzene	0.0485		mg/Kg wet	0.0500		96.9	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
<b>Batch B227113 - SW-846 5035</b>										
<b>LCS Dup (B227113-BSD1)</b>										
Prepared & Analyzed: 04/01/19										
Acetone	0.250	0.10	mg/Kg wet	0.200		125	40-160	6.89	20	†
tert-Amyl Methyl Ether (TAME)	0.0203	0.0010	mg/Kg wet	0.0200		102	70-130	3.30	20	
Benzene	0.0173	0.0020	mg/Kg wet	0.0200		86.4	70-130	4.69	20	
Bromobenzene	0.0205	0.0020	mg/Kg wet	0.0200		102	70-130	1.89	20	
Bromochloromethane	0.0191	0.0020	mg/Kg wet	0.0200		95.4	70-130	8.22	20	
Bromodichloromethane	0.0191	0.0020	mg/Kg wet	0.0200		95.6	70-130	2.76	20	
Bromoform	0.0240	0.0020	mg/Kg wet	0.0200		120	70-130	3.54	20	V-20
Bromomethane	0.0119	0.010	mg/Kg wet	0.0200		59.7	40-160	4.87	20	L-14, V-34 †
2-Butanone (MEK)	0.225	0.040	mg/Kg wet	0.200		112	40-160	1.42	20	†
n-Butylbenzene	0.0212	0.0020	mg/Kg wet	0.0200		106	70-130	0.577	20	
sec-Butylbenzene	0.0217	0.0020	mg/Kg wet	0.0200		109	70-130	0.702	20	
tert-Butylbenzene	0.0216	0.0020	mg/Kg wet	0.0200		108	70-130	1.75	20	
tert-Butyl Ethyl Ether (TBEE)	0.0194	0.0010	mg/Kg wet	0.0200		97.1	70-130	3.45	20	
Carbon Disulfide	0.0192	0.0060	mg/Kg wet	0.0200		96.2	70-130	7.49	20	
Carbon Tetrachloride	0.0191	0.0020	mg/Kg wet	0.0200		95.6	70-130	5.41	20	
Chlorobenzene	0.0207	0.0020	mg/Kg wet	0.0200		104	70-130	3.15	20	
Chlorodibromomethane	0.0215	0.0010	mg/Kg wet	0.0200		107	70-130	4.46	20	
Chloroethane	0.0194	0.010	mg/Kg wet	0.0200		97.2	70-130	6.31	20	
Chloroform	0.0173	0.0040	mg/Kg wet	0.0200		86.5	70-130	2.14	20	
Chloromethane	0.0118	0.010	mg/Kg wet	0.0200		58.9	40-160	2.75	20	L-14 †
2-Chlorotoluene	0.0206	0.0020	mg/Kg wet	0.0200		103	70-130	2.25	20	
4-Chlorotoluene	0.0210	0.0020	mg/Kg wet	0.0200		105	70-130	4.01	20	
1,2-Dibromo-3-chloropropane (DBCP)	0.0230	0.0020	mg/Kg wet	0.0200		115	70-130	3.64	20	
1,2-Dibromoethane (EDB)	0.0196	0.0010	mg/Kg wet	0.0200		97.8	70-130	3.66	20	
Dibromomethane	0.0190	0.0020	mg/Kg wet	0.0200		94.9	70-130	10.1	20	
1,2-Dichlorobenzene	0.0209	0.0020	mg/Kg wet	0.0200		105	70-130	0.867	20	
1,3-Dichlorobenzene	0.0217	0.0020	mg/Kg wet	0.0200		109	70-130	1.47	20	
1,4-Dichlorobenzene	0.0204	0.0020	mg/Kg wet	0.0200		102	70-130	1.74	20	
Dichlorodifluoromethane (Freon 12)	0.0106	0.010	mg/Kg wet	0.0200		52.8	40-160	1.12	20	L-14 †
1,1-Dichloroethane	0.0181	0.0020	mg/Kg wet	0.0200		90.4	70-130	4.56	20	
1,2-Dichloroethane	0.0185	0.0020	mg/Kg wet	0.0200		92.7	70-130	5.02	20	
1,1-Dichloroethylene	0.0176	0.0040	mg/Kg wet	0.0200		88.1	70-130	2.15	20	
cis-1,2-Dichloroethylene	0.0173	0.0020	mg/Kg wet	0.0200		86.7	70-130	0.439	20	
trans-1,2-Dichloroethylene	0.0179	0.0020	mg/Kg wet	0.0200		89.7	70-130	3.70	20	
1,2-Dichloropropane	0.0190	0.0020	mg/Kg wet	0.0200		95.2	70-130	5.50	20	
1,3-Dichloropropane	0.0181	0.0010	mg/Kg wet	0.0200		90.6	70-130	2.59	20	
2,2-Dichloropropane	0.0189	0.0020	mg/Kg wet	0.0200		94.6	70-130	2.72	20	
1,1-Dichloropropene	0.0179	0.0020	mg/Kg wet	0.0200		89.3	70-130	4.20	20	
cis-1,3-Dichloropropene	0.0197	0.0010	mg/Kg wet	0.0200		98.5	70-130	3.67	20	
trans-1,3-Dichloropropene	0.0205	0.0010	mg/Kg wet	0.0200		103	70-130	4.28	20	
Diethyl Ether	0.0184	0.010	mg/Kg wet	0.0200		91.8	70-130	5.17	20	
Diisopropyl Ether (DIPE)	0.0184	0.0010	mg/Kg wet	0.0200		92.0	70-130	3.22	20	
1,4-Dioxane	0.195	0.10	mg/Kg wet	0.200		97.6	40-160	0.510	20	V-16 †
Ethylbenzene	0.0201	0.0020	mg/Kg wet	0.0200		100	70-130	0.950	20	
Hexachlorobutadiene	0.0228	0.0020	mg/Kg wet	0.0200		114	70-130	1.23	20	
2-Hexanone (MBK)	0.215	0.020	mg/Kg wet	0.200		108	40-160	3.68	20	†
Isopropylbenzene (Cumene)	0.0215	0.0020	mg/Kg wet	0.0200		108	70-130	2.65	20	
p-Isopropyltoluene (p-Cymene)	0.0215	0.0020	mg/Kg wet	0.0200		108	70-130	0.652	20	
Methyl tert-Butyl Ether (MTBE)	0.0260	0.0040	mg/Kg wet	0.0200		130	70-130	7.70	20	V-20
Methylene Chloride	0.0194	0.010	mg/Kg wet	0.0200		96.8	70-130	3.30	20	
4-Methyl-2-pentanone (MIBK)	0.204	0.020	mg/Kg wet	0.200		102	40-160	5.04	20	†
Naphthalene	0.0204	0.0040	mg/Kg wet	0.0200		102	70-130	0.625	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
<b>Batch B227113 - SW-846 5035</b>										
<b>LCS Dup (B227113-BSD1)</b>										
Prepared & Analyzed: 04/01/19										
n-Propylbenzene	0.0209	0.0020	mg/Kg wet	0.0200		105	70-130	2.53	20	
Styrene	0.0204	0.0020	mg/Kg wet	0.0200		102	70-130	2.48	20	
1,1,1,2-Tetrachloroethane	0.0216	0.0020	mg/Kg wet	0.0200		108	70-130	3.22	20	
1,1,2,2-Tetrachloroethane	0.0227	0.0010	mg/Kg wet	0.0200		113	70-130	8.01	20	
Tetrachloroethylene	0.0192	0.0020	mg/Kg wet	0.0200		96.1	70-130	1.20	20	
Tetrahydrofuran	0.0163	0.010	mg/Kg wet	0.0200		81.7	70-130	16.1	20	
Toluene	0.0185	0.0020	mg/Kg wet	0.0200		92.7	70-130	3.37	20	
1,2,3-Trichlorobenzene	0.0214	0.0020	mg/Kg wet	0.0200		107	70-130	0.875	20	
1,2,4-Trichlorobenzene	0.0216	0.0020	mg/Kg wet	0.0200		108	70-130	3.96	20	
1,1,1-Trichloroethane	0.0182	0.0020	mg/Kg wet	0.0200		91.1	70-130	1.43	20	
1,1,2-Trichloroethane	0.0195	0.0020	mg/Kg wet	0.0200		97.7	70-130	3.57	20	
Trichloroethylene	0.0182	0.0020	mg/Kg wet	0.0200		91.2	70-130	6.16	20	
Trichlorofluoromethane (Freon 11)	0.0147	0.010	mg/Kg wet	0.0200		73.6	70-130	3.05	20	
1,2,3-Trichloropropane	0.0196	0.0020	mg/Kg wet	0.0200		98.2	70-130	2.32	20	
1,2,4-Trimethylbenzene	0.0199	0.0020	mg/Kg wet	0.0200		99.7	70-130	0.866	20	
1,3,5-Trimethylbenzene	0.0208	0.0020	mg/Kg wet	0.0200		104	70-130	2.96	20	
<b>Vinyl Chloride</b>	0.0137	0.010	mg/Kg wet	0.0200		<b>68.3</b> *	70-130	2.99	20	L-04
m+p Xylene	0.0402	0.0040	mg/Kg wet	0.0400		101	70-130	0.834	20	
o-Xylene	0.0205	0.0020	mg/Kg wet	0.0200		102	70-130	3.72	20	
Surrogate: 1,2-Dichloroethane-d4	0.0485		mg/Kg wet	0.0500		97.0	70-130			
Surrogate: Toluene-d8	0.0488		mg/Kg wet	0.0500		97.6	70-130			
Surrogate: 4-Bromofluorobenzene	0.0472		mg/Kg wet	0.0500		94.5	70-130			
<b>Batch B227135 - SW-846 5035</b>										
<b>Blank (B227135-BLK1)</b>										
Prepared & Analyzed: 04/01/19										
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							
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							

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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
<b>Batch B227135 - SW-846 5035</b>										
<b>Blank (B227135-BLK1)</b>										
Prepared & Analyzed: 04/01/19										
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							
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							
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							L-04
m+p Xylene	ND	0.0040	mg/Kg wet							
o-Xylene	ND	0.0020	mg/Kg wet							
Surrogate: 1,2-Dichloroethane-d4	0.0470		mg/Kg wet	0.0500		93.9	70-130			
Surrogate: Toluene-d8	0.0480		mg/Kg wet	0.0500		95.9	70-130			
Surrogate: 4-Bromofluorobenzene	0.0479		mg/Kg wet	0.0500		95.8	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
<b>Batch B227135 - SW-846 5035</b>										
<b>LCS (B227135-BS1)</b>										
Prepared & Analyzed: 04/01/19										
Acetone	0.200	0.10	mg/Kg wet	0.200		99.9	40-160			†
tert-Amyl Methyl Ether (TAME)	0.0187	0.0010	mg/Kg wet	0.0200		93.3	70-130			
Benzene	0.0164	0.0020	mg/Kg wet	0.0200		82.0	70-130			
Bromobenzene	0.0199	0.0020	mg/Kg wet	0.0200		99.5	70-130			
Bromochloromethane	0.0173	0.0020	mg/Kg wet	0.0200		86.4	70-130			
Bromodichloromethane	0.0188	0.0020	mg/Kg wet	0.0200		94.2	70-130			
Bromoform	0.0228	0.0020	mg/Kg wet	0.0200		114	70-130			V-20
Bromomethane	0.0106	0.010	mg/Kg wet	0.0200		52.8	40-160			L-14, V-34 †
2-Butanone (MEK)	0.198	0.040	mg/Kg wet	0.200		98.9	40-160			†
n-Butylbenzene	0.0204	0.0020	mg/Kg wet	0.0200		102	70-130			
sec-Butylbenzene	0.0211	0.0020	mg/Kg wet	0.0200		106	70-130			
tert-Butylbenzene	0.0210	0.0020	mg/Kg wet	0.0200		105	70-130			
tert-Butyl Ethyl Ether (TBEE)	0.0182	0.0010	mg/Kg wet	0.0200		91.1	70-130			
Carbon Disulfide	0.0182	0.0060	mg/Kg wet	0.0200		91.2	70-130			
Carbon Tetrachloride	0.0178	0.0020	mg/Kg wet	0.0200		89.0	70-130			
Chlorobenzene	0.0204	0.0020	mg/Kg wet	0.0200		102	70-130			
Chlorodibromomethane	0.0213	0.0010	mg/Kg wet	0.0200		106	70-130			
Chloroethane	0.0173	0.010	mg/Kg wet	0.0200		86.4	70-130			
Chloroform	0.0166	0.0040	mg/Kg wet	0.0200		83.0	70-130			
Chloromethane	0.0109	0.010	mg/Kg wet	0.0200		54.7	40-160			L-14 †
2-Chlorotoluene	0.0205	0.0020	mg/Kg wet	0.0200		103	70-130			
4-Chlorotoluene	0.0200	0.0020	mg/Kg wet	0.0200		100	70-130			
1,2-Dibromo-3-chloropropane (DBCP)	0.0230	0.0020	mg/Kg wet	0.0200		115	70-130			
1,2-Dibromoethane (EDB)	0.0189	0.0010	mg/Kg wet	0.0200		94.3	70-130			
Dibromomethane	0.0178	0.0020	mg/Kg wet	0.0200		89.2	70-130			
1,2-Dichlorobenzene	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130			
1,3-Dichlorobenzene	0.0211	0.0020	mg/Kg wet	0.0200		105	70-130			
1,4-Dichlorobenzene	0.0196	0.0020	mg/Kg wet	0.0200		98.2	70-130			
Dichlorodifluoromethane (Freon 12)	0.00943	0.010	mg/Kg wet	0.0200		47.2	40-160			L-14 †
1,1-Dichloroethane	0.0171	0.0020	mg/Kg wet	0.0200		85.4	70-130			
1,2-Dichloroethane	0.0179	0.0020	mg/Kg wet	0.0200		89.6	70-130			
1,1-Dichloroethylene	0.0166	0.0040	mg/Kg wet	0.0200		83.0	70-130			
cis-1,2-Dichloroethylene	0.0169	0.0020	mg/Kg wet	0.0200		84.4	70-130			
trans-1,2-Dichloroethylene	0.0170	0.0020	mg/Kg wet	0.0200		85.0	70-130			
1,2-Dichloropropane	0.0179	0.0020	mg/Kg wet	0.0200		89.6	70-130			
1,3-Dichloropropane	0.0181	0.0010	mg/Kg wet	0.0200		90.6	70-130			
2,2-Dichloropropane	0.0177	0.0020	mg/Kg wet	0.0200		88.6	70-130			
1,1-Dichloropropene	0.0164	0.0020	mg/Kg wet	0.0200		82.1	70-130			
cis-1,3-Dichloropropene	0.0188	0.0010	mg/Kg wet	0.0200		94.0	70-130			
trans-1,3-Dichloropropene	0.0195	0.0010	mg/Kg wet	0.0200		97.3	70-130			
Diethyl Ether	0.0169	0.010	mg/Kg wet	0.0200		84.5	70-130			
Diisopropyl Ether (DIPE)	0.0174	0.0010	mg/Kg wet	0.0200		87.0	70-130			
1,4-Dioxane	0.208	0.10	mg/Kg wet	0.200		104	40-160			V-16 †
Ethylbenzene	0.0199	0.0020	mg/Kg wet	0.0200		99.3	70-130			
Hexachlorobutadiene	0.0222	0.0020	mg/Kg wet	0.0200		111	70-130			
2-Hexanone (MBK)	0.199	0.020	mg/Kg wet	0.200		99.5	40-160			†
Isopropylbenzene (Cumene)	0.0213	0.0020	mg/Kg wet	0.0200		107	70-130			
p-Isopropyltoluene (p-Cymene)	0.0210	0.0020	mg/Kg wet	0.0200		105	70-130			
Methyl tert-Butyl Ether (MTBE)	0.0228	0.0040	mg/Kg wet	0.0200		114	70-130			V-20
Methylene Chloride	0.0189	0.010	mg/Kg wet	0.0200		94.4	70-130			
4-Methyl-2-pentanone (MIBK)	0.195	0.020	mg/Kg wet	0.200		97.4	40-160			†
Naphthalene	0.0197	0.0040	mg/Kg wet	0.0200		98.4	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
<b>Batch B227135 - SW-846 5035</b>										
<b>LCS (B227135-BS1)</b>										
Prepared & Analyzed: 04/01/19										
n-Propylbenzene	0.0207	0.0020	mg/Kg wet	0.0200		104	70-130			
Styrene	0.0198	0.0020	mg/Kg wet	0.0200		98.9	70-130			
1,1,1,2-Tetrachloroethane	0.0208	0.0020	mg/Kg wet	0.0200		104	70-130			
1,1,2,2-Tetrachloroethane	0.0213	0.0010	mg/Kg wet	0.0200		106	70-130			
Tetrachloroethylene	0.0195	0.0020	mg/Kg wet	0.0200		97.4	70-130			
Tetrahydrofuran	0.0180	0.010	mg/Kg wet	0.0200		89.8	70-130			
Toluene	0.0186	0.0020	mg/Kg wet	0.0200		93.2	70-130			
1,2,3-Trichlorobenzene	0.0205	0.0020	mg/Kg wet	0.0200		102	70-130			
1,2,4-Trichlorobenzene	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130			
1,1,1-Trichloroethane	0.0175	0.0020	mg/Kg wet	0.0200		87.7	70-130			
1,1,2-Trichloroethane	0.0199	0.0020	mg/Kg wet	0.0200		99.5	70-130			
Trichloroethylene	0.0179	0.0020	mg/Kg wet	0.0200		89.7	70-130			
Trichlorofluoromethane (Freon 11)	0.0144	0.010	mg/Kg wet	0.0200		72.0	70-130			
1,2,3-Trichloropropane	0.0183	0.0020	mg/Kg wet	0.0200		91.5	70-130			
1,2,4-Trimethylbenzene	0.0194	0.0020	mg/Kg wet	0.0200		97.2	70-130			
1,3,5-Trimethylbenzene	0.0203	0.0020	mg/Kg wet	0.0200		102	70-130			
<b>Vinyl Chloride</b>	0.0126	0.010	mg/Kg wet	0.0200		<b>63.0</b> *	70-130			L-04
m+p Xylene	0.0398	0.0040	mg/Kg wet	0.0400		99.6	70-130			
o-Xylene	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0472		mg/Kg wet	0.0500		94.5	70-130			
Surrogate: Toluene-d8	0.0489		mg/Kg wet	0.0500		97.9	70-130			
Surrogate: 4-Bromofluorobenzene	0.0485		mg/Kg wet	0.0500		97.1	70-130			
<b>LCS Dup (B227135-BS1)</b>										
Prepared & Analyzed: 04/01/19										
Acetone	0.203	0.10	mg/Kg wet	0.200		101	40-160	1.51	20	†
tert-Amyl Methyl Ether (TAME)	0.0200	0.0010	mg/Kg wet	0.0200		99.9	70-130	6.83	20	
Benzene	0.0173	0.0020	mg/Kg wet	0.0200		86.3	70-130	5.18	20	
Bromobenzene	0.0203	0.0020	mg/Kg wet	0.0200		101	70-130	1.97	20	
Bromochloromethane	0.0188	0.0020	mg/Kg wet	0.0200		93.8	70-130	8.26	20	
Bromodichloromethane	0.0199	0.0020	mg/Kg wet	0.0200		99.3	70-130	5.26	20	
Bromoform	0.0247	0.0020	mg/Kg wet	0.0200		124	70-130	8.19	20	V-20
Bromomethane	0.0116	0.010	mg/Kg wet	0.0200		57.9	40-160	9.27	20	L-14, V-34 †
2-Butanone (MEK)	0.202	0.040	mg/Kg wet	0.200		101	40-160	2.24	20	†
n-Butylbenzene	0.0222	0.0020	mg/Kg wet	0.0200		111	70-130	8.20	20	
sec-Butylbenzene	0.0226	0.0020	mg/Kg wet	0.0200		113	70-130	7.09	20	
tert-Butylbenzene	0.0224	0.0020	mg/Kg wet	0.0200		112	70-130	6.80	20	
tert-Butyl Ethyl Ether (TBEE)	0.0195	0.0010	mg/Kg wet	0.0200		97.5	70-130	6.77	20	
Carbon Disulfide	0.0190	0.0060	mg/Kg wet	0.0200		94.9	70-130	3.96	20	
Carbon Tetrachloride	0.0188	0.0020	mg/Kg wet	0.0200		93.8	70-130	5.27	20	
Chlorobenzene	0.0214	0.0020	mg/Kg wet	0.0200		107	70-130	4.58	20	
Chlorodibromomethane	0.0223	0.0010	mg/Kg wet	0.0200		111	70-130	4.73	20	
Chloroethane	0.0183	0.010	mg/Kg wet	0.0200		91.7	70-130	6.00	20	
Chloroform	0.0175	0.0040	mg/Kg wet	0.0200		87.7	70-130	5.52	20	
Chloromethane	0.0114	0.010	mg/Kg wet	0.0200		56.9	40-160	3.87	20	L-14 †
2-Chlorotoluene	0.0216	0.0020	mg/Kg wet	0.0200		108	70-130	4.96	20	
4-Chlorotoluene	0.0213	0.0020	mg/Kg wet	0.0200		106	70-130	6.19	20	
1,2-Dibromo-3-chloropropane (DBCP)	0.0255	0.0020	mg/Kg wet	0.0200		127	70-130	10.2	20	
1,2-Dibromoethane (EDB)	0.0206	0.0010	mg/Kg wet	0.0200		103	70-130	8.68	20	
Dibromomethane	0.0191	0.0020	mg/Kg wet	0.0200		95.6	70-130	6.99	20	
1,2-Dichlorobenzene	0.0221	0.0020	mg/Kg wet	0.0200		111	70-130	8.98	20	
1,3-Dichlorobenzene	0.0224	0.0020	mg/Kg wet	0.0200		112	70-130	6.33	20	
1,4-Dichlorobenzene	0.0216	0.0020	mg/Kg wet	0.0200		108	70-130	9.61	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
<b>Batch B227135 - SW-846 5035</b>										
<b>LCS Dup (B227135-BSD1)</b>										
Prepared & Analyzed: 04/01/19										
Dichlorodifluoromethane (Freon 12)	0.00957	0.010	mg/Kg wet	0.0200		47.9	40-160	1.52	20	L-14 †
1,1-Dichloroethane	0.0180	0.0020	mg/Kg wet	0.0200		89.9	70-130	5.14	20	
1,2-Dichloroethane	0.0192	0.0020	mg/Kg wet	0.0200		95.8	70-130	6.59	20	
1,1-Dichloroethylene	0.0175	0.0040	mg/Kg wet	0.0200		87.4	70-130	5.17	20	
cis-1,2-Dichloroethylene	0.0179	0.0020	mg/Kg wet	0.0200		89.5	70-130	5.81	20	
trans-1,2-Dichloroethylene	0.0178	0.0020	mg/Kg wet	0.0200		89.0	70-130	4.60	20	
1,2-Dichloropropane	0.0193	0.0020	mg/Kg wet	0.0200		96.6	70-130	7.42	20	
1,3-Dichloropropane	0.0191	0.0010	mg/Kg wet	0.0200		95.7	70-130	5.43	20	
2,2-Dichloropropane	0.0182	0.0020	mg/Kg wet	0.0200		91.1	70-130	2.84	20	
1,1-Dichloropropene	0.0173	0.0020	mg/Kg wet	0.0200		86.5	70-130	5.19	20	
cis-1,3-Dichloropropene	0.0198	0.0010	mg/Kg wet	0.0200		99.1	70-130	5.26	20	
trans-1,3-Dichloropropene	0.0206	0.0010	mg/Kg wet	0.0200		103	70-130	5.78	20	
Diethyl Ether	0.0179	0.010	mg/Kg wet	0.0200		89.7	70-130	6.05	20	
Diisopropyl Ether (DIPE)	0.0183	0.0010	mg/Kg wet	0.0200		91.6	70-130	5.25	20	
1,4-Dioxane	0.209	0.10	mg/Kg wet	0.200		105	40-160	0.495	20	V-16 †
Ethylbenzene	0.0208	0.0020	mg/Kg wet	0.0200		104	70-130	4.67	20	
Hexachlorobutadiene	0.0245	0.0020	mg/Kg wet	0.0200		122	70-130	9.69	20	
2-Hexanone (MBK)	0.212	0.020	mg/Kg wet	0.200		106	40-160	6.50	20	†
Isopropylbenzene (Cumene)	0.0223	0.0020	mg/Kg wet	0.0200		112	70-130	4.56	20	
p-Isopropyltoluene (p-Cymene)	0.0224	0.0020	mg/Kg wet	0.0200		112	70-130	6.40	20	
Methyl tert-Butyl Ether (MTBE)	0.0258	0.0040	mg/Kg wet	0.0200		129	70-130	12.5	20	V-20
Methylene Chloride	0.0192	0.010	mg/Kg wet	0.0200		96.1	70-130	1.81	20	
4-Methyl-2-pentanone (MIBK)	0.209	0.020	mg/Kg wet	0.200		104	40-160	7.05	20	†
Naphthalene	0.0212	0.0040	mg/Kg wet	0.0200		106	70-130	7.39	20	
n-Propylbenzene	0.0214	0.0020	mg/Kg wet	0.0200		107	70-130	3.25	20	
Styrene	0.0208	0.0020	mg/Kg wet	0.0200		104	70-130	4.98	20	
1,1,1,2-Tetrachloroethane	0.0225	0.0020	mg/Kg wet	0.0200		112	70-130	7.88	20	
1,1,2,2-Tetrachloroethane	0.0228	0.0010	mg/Kg wet	0.0200		114	70-130	6.66	20	
Tetrachloroethylene	0.0205	0.0020	mg/Kg wet	0.0200		103	70-130	5.16	20	
Tetrahydrofuran	0.0183	0.010	mg/Kg wet	0.0200		91.3	70-130	1.62	20	
Toluene	0.0194	0.0020	mg/Kg wet	0.0200		96.9	70-130	3.92	20	
1,2,3-Trichlorobenzene	0.0217	0.0020	mg/Kg wet	0.0200		109	70-130	5.89	20	
1,2,4-Trichlorobenzene	0.0222	0.0020	mg/Kg wet	0.0200		111	70-130	9.26	20	
1,1,1-Trichloroethane	0.0183	0.0020	mg/Kg wet	0.0200		91.4	70-130	4.14	20	
1,1,2-Trichloroethane	0.0198	0.0020	mg/Kg wet	0.0200		99.1	70-130	0.413	20	
Trichloroethylene	0.0190	0.0020	mg/Kg wet	0.0200		94.9	70-130	5.65	20	
Trichlorofluoromethane (Freon 11)	0.0141	0.010	mg/Kg wet	0.0200		70.4	70-130	2.28	20	
1,2,3-Trichloropropane	0.0197	0.0020	mg/Kg wet	0.0200		98.6	70-130	7.40	20	
1,2,4-Trimethylbenzene	0.0210	0.0020	mg/Kg wet	0.0200		105	70-130	7.82	20	
1,3,5-Trimethylbenzene	0.0215	0.0020	mg/Kg wet	0.0200		107	70-130	5.65	20	
<b>Vinyl Chloride</b>	0.0137	0.010	mg/Kg wet	0.0200		<b>68.3</b> *	70-130	8.03	20	L-04
m+p Xylene	0.0420	0.0040	mg/Kg wet	0.0400		105	70-130	5.31	20	
o-Xylene	0.0211	0.0020	mg/Kg wet	0.0200		105	70-130	4.50	20	
Surrogate: 1,2-Dichloroethane-d4	0.0471		mg/Kg wet	0.0500		94.2	70-130			
Surrogate: Toluene-d8	0.0484		mg/Kg wet	0.0500		96.7	70-130			
Surrogate: 4-Bromofluorobenzene	0.0478		mg/Kg wet	0.0500		95.6	70-130			

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 B227222 - SW-846 3546

Blank (B227222-BLK1)

Prepared: 04/02/19 Analyzed: 04/03/19

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							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							
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							
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							
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							
2,4-Dinitrophenol	ND	0.66	mg/Kg wet							
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							
1,2-Diphenylhydrazine/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							V-05
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							

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
<b>Batch B227222 - SW-846 3546</b>										
<b>Blank (B227222-BLK1)</b>										
Prepared: 04/02/19 Analyzed: 04/03/19										
Phenol	ND	0.34	mg/Kg wet							
Pyrene	ND	0.17	mg/Kg wet							
Pyridine	ND	0.34	mg/Kg wet							
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	6.15		mg/Kg wet	6.67		92.2	30-130			
Surrogate: Phenol-d6	6.54		mg/Kg wet	6.67		98.0	30-130			
Surrogate: Nitrobenzene-d5	3.20		mg/Kg wet	3.33		95.9	30-130			
Surrogate: 2-Fluorobiphenyl	3.32		mg/Kg wet	3.33		99.6	30-130			
Surrogate: 2,4,6-Tribromophenol	7.60		mg/Kg wet	6.67		114	30-130			
Surrogate: p-Terphenyl-d14	4.21		mg/Kg wet	3.33		126	30-130			
<b>LCS (B227222-BS1)</b>										
Prepared: 04/02/19 Analyzed: 04/03/19										
Acenaphthene	1.10	0.17	mg/Kg wet	1.67		65.9	40-140			
Acenaphthylene	1.13	0.17	mg/Kg wet	1.67		67.8	40-140			
Acetophenone	1.07	0.34	mg/Kg wet	1.67		64.2	40-140			
<b>Aniline</b>	0.607	0.34	mg/Kg wet	1.67		<b>36.4</b>	<b>40-140</b>	*		L-07, V-34
Anthracene	1.24	0.17	mg/Kg wet	1.67		74.2	40-140			
Benzo(a)anthracene	1.18	0.17	mg/Kg wet	1.67		70.6	40-140			
Benzo(a)pyrene	1.28	0.17	mg/Kg wet	1.67		76.6	40-140			
Benzo(b)fluoranthene	1.19	0.17	mg/Kg wet	1.67		71.6	40-140			
Benzo(g,h,i)perylene	1.35	0.17	mg/Kg wet	1.67		80.9	40-140			
Benzo(k)fluoranthene	1.23	0.17	mg/Kg wet	1.67		74.0	40-140			
Bis(2-chloroethoxy)methane	1.33	0.34	mg/Kg wet	1.67		79.6	40-140			
Bis(2-chloroethyl)ether	1.17	0.34	mg/Kg wet	1.67		70.0	40-140			
Bis(2-chloroisopropyl)ether	1.37	0.34	mg/Kg wet	1.67		82.4	40-140			
Bis(2-Ethylhexyl)phthalate	1.46	0.34	mg/Kg wet	1.67		87.5	40-140			
4-Bromophenylphenylether	1.22	0.34	mg/Kg wet	1.67		73.3	40-140			
Butylbenzylphthalate	1.42	0.34	mg/Kg wet	1.67		85.5	40-140			
4-Chloroaniline	0.614	0.66	mg/Kg wet	1.67		36.9	15-140			V-34 †
2-Chloronaphthalene	1.03	0.34	mg/Kg wet	1.67		61.6	40-140			
2-Chlorophenol	1.12	0.34	mg/Kg wet	1.67		67.0	30-130			
Chrysene	1.20	0.17	mg/Kg wet	1.67		71.8	40-140			
Dibenz(a,h)anthracene	1.27	0.17	mg/Kg wet	1.67		76.0	40-140			
Dibenzofuran	1.17	0.34	mg/Kg wet	1.67		69.9	40-140			
Di-n-butylphthalate	1.34	0.34	mg/Kg wet	1.67		80.2	40-140			
1,2-Dichlorobenzene	0.939	0.34	mg/Kg wet	1.67		56.3	40-140			
1,3-Dichlorobenzene	0.910	0.34	mg/Kg wet	1.67		54.6	40-140			
1,4-Dichlorobenzene	0.922	0.34	mg/Kg wet	1.67		55.3	40-140			
3,3-Dichlorobenzidine	0.818	0.17	mg/Kg wet	1.67		49.1	40-140			V-34
2,4-Dichlorophenol	1.10	0.34	mg/Kg wet	1.67		65.7	30-130			
Diethylphthalate	1.28	0.34	mg/Kg wet	1.67		77.0	40-140			
2,4-Dimethylphenol	1.15	0.34	mg/Kg wet	1.67		69.3	30-130			
Dimethylphthalate	1.25	0.34	mg/Kg wet	1.67		74.8	40-140			
2,4-Dinitrophenol	0.720	0.66	mg/Kg wet	1.67		43.2	15-140			†
2,4-Dinitrotoluene	1.20	0.34	mg/Kg wet	1.67		71.7	40-140			
2,6-Dinitrotoluene	1.25	0.34	mg/Kg wet	1.67		75.0	40-140			
Di-n-octylphthalate	1.44	0.34	mg/Kg wet	1.67		86.2	40-140			
1,2-Diphenylhydrazine/Azobenzene	1.32	0.34	mg/Kg wet	1.67		79.0	40-140			
Fluoranthene	1.17	0.17	mg/Kg wet	1.67		70.3	40-140			
Fluorene	1.20	0.17	mg/Kg wet	1.67		71.8	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
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Batch B227222 - SW-846 3546

LCS (B227222-BS1)

Prepared: 04/02/19 Analyzed: 04/03/19

Hexachlorobenzene	1.16	0.34	mg/Kg wet	1.67		69.7	40-140			
Hexachlorobutadiene	0.986	0.34	mg/Kg wet	1.67		59.2	40-140			
Hexachloroethane	0.986	0.34	mg/Kg wet	1.67		59.1	40-140			
Indeno(1,2,3-cd)pyrene	1.29	0.17	mg/Kg wet	1.67		77.6	40-140			
Isophorone	1.18	0.34	mg/Kg wet	1.67		71.1	40-140			
2-Methylnaphthalene	1.13	0.17	mg/Kg wet	1.67		68.1	40-140			
2-Methylphenol	0.884	0.34	mg/Kg wet	1.67		53.0	30-130			V-05
3/4-Methylphenol	1.10	0.34	mg/Kg wet	1.67		66.3	30-130			
Naphthalene	1.03	0.17	mg/Kg wet	1.67		62.1	40-140			
Nitrobenzene	1.06	0.34	mg/Kg wet	1.67		63.3	40-140			
2-Nitrophenol	1.13	0.34	mg/Kg wet	1.67		67.7	30-130			
4-Nitrophenol	1.18	0.66	mg/Kg wet	1.67		70.8	15-140			†
Pentachlorophenol	1.09	0.34	mg/Kg wet	1.67		65.3	30-130			
Phenanthrene	1.22	0.17	mg/Kg wet	1.67		73.3	40-140			
Phenol	1.11	0.34	mg/Kg wet	1.67		66.7	15-140			†
Pyrene	1.32	0.17	mg/Kg wet	1.67		79.2	40-140			
Pyridine	0.677	0.34	mg/Kg wet	1.67		40.6	30-140			†
1,2,4-Trichlorobenzene	0.997	0.34	mg/Kg wet	1.67		59.8	40-140			
2,4,5-Trichlorophenol	1.17	0.34	mg/Kg wet	1.67		70.0	30-130			
2,4,6-Trichlorophenol	1.22	0.34	mg/Kg wet	1.67		73.1	30-130			
Surrogate: 2-Fluorophenol	4.31		mg/Kg wet	6.67		64.6	30-130			
Surrogate: Phenol-d6	4.70		mg/Kg wet	6.67		70.4	30-130			
Surrogate: Nitrobenzene-d5	2.31		mg/Kg wet	3.33		69.2	30-130			
Surrogate: 2-Fluorobiphenyl	2.42		mg/Kg wet	3.33		72.7	30-130			
Surrogate: 2,4,6-Tribromophenol	5.26		mg/Kg wet	6.67		78.8	30-130			
Surrogate: p-Terphenyl-d14	2.88		mg/Kg wet	3.33		86.5	30-130			

LCS Dup (B227222-BS1)

Prepared: 04/02/19 Analyzed: 04/03/19

Acenaphthene	1.03	0.17	mg/Kg wet	1.67		61.7	40-140	6.68	30	
Acenaphthylene	1.06	0.17	mg/Kg wet	1.67		63.4	40-140	6.68	30	
Acetophenone	1.01	0.34	mg/Kg wet	1.67		60.8	40-140	5.50	30	
Aniline	0.760	0.34	mg/Kg wet	1.67		45.6	40-140	22.4	30	V-34
Anthracene	1.14	0.17	mg/Kg wet	1.67		68.4	40-140	8.05	30	
Benzo(a)anthracene	1.10	0.17	mg/Kg wet	1.67		66.1	40-140	6.61	30	
Benzo(a)pyrene	1.21	0.17	mg/Kg wet	1.67		72.4	40-140	5.64	30	
Benzo(b)fluoranthene	1.14	0.17	mg/Kg wet	1.67		68.3	40-140	4.66	30	
Benzo(g,h,i)perylene	1.26	0.17	mg/Kg wet	1.67		75.7	40-140	6.61	30	
Benzo(k)fluoranthene	1.16	0.17	mg/Kg wet	1.67		69.5	40-140	6.27	30	
Bis(2-chloroethoxy)methane	1.21	0.34	mg/Kg wet	1.67		72.8	40-140	8.95	30	
Bis(2-chloroethyl)ether	1.06	0.34	mg/Kg wet	1.67		63.5	40-140	9.68	30	
Bis(2-chloroisopropyl)ether	1.25	0.34	mg/Kg wet	1.67		74.8	40-140	9.62	30	
Bis(2-Ethylhexyl)phthalate	1.32	0.34	mg/Kg wet	1.67		79.2	40-140	9.89	30	
4-Bromophenylphenylether	1.14	0.34	mg/Kg wet	1.67		68.5	40-140	6.74	30	
Butylbenzylphthalate	1.30	0.34	mg/Kg wet	1.67		78.0	40-140	9.15	30	
4-Chloroaniline	0.779	0.66	mg/Kg wet	1.67		46.7	15-140	23.6	30	V-34 †
2-Chloronaphthalene	0.973	0.34	mg/Kg wet	1.67		58.4	40-140	5.34	30	
2-Chlorophenol	1.05	0.34	mg/Kg wet	1.67		63.2	30-130	5.81	30	
Chrysene	1.13	0.17	mg/Kg wet	1.67		67.9	40-140	5.55	30	
Dibenz(a,h)anthracene	1.19	0.17	mg/Kg wet	1.67		71.5	40-140	6.05	30	
Dibenzofuran	1.09	0.34	mg/Kg wet	1.67		65.7	40-140	6.28	30	
Di-n-butylphthalate	1.22	0.34	mg/Kg wet	1.67		73.3	40-140	8.91	30	
1,2-Dichlorobenzene	0.887	0.34	mg/Kg wet	1.67		53.2	40-140	5.66	30	

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

**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 B227222 - SW-846 3546**

**LCS Dup (B227222-BSD1)**

Prepared: 04/02/19 Analyzed: 04/03/19

1,3-Dichlorobenzene	0.851	0.34	mg/Kg wet	1.67		51.1	40-140	6.70	30	
1,4-Dichlorobenzene	0.851	0.34	mg/Kg wet	1.67		51.0	40-140	8.01	30	
3,3-Dichlorobenzidine	0.935	0.17	mg/Kg wet	1.67		56.1	40-140	13.3	30	V-34
2,4-Dichlorophenol	1.03	0.34	mg/Kg wet	1.67		61.6	30-130	6.47	30	
Diethylphthalate	1.20	0.34	mg/Kg wet	1.67		72.2	40-140	6.43	30	
2,4-Dimethylphenol	1.06	0.34	mg/Kg wet	1.67		63.5	30-130	8.64	30	
Dimethylphthalate	1.17	0.34	mg/Kg wet	1.67		70.3	40-140	6.28	30	
2,4-Dinitrophenol	0.670	0.66	mg/Kg wet	1.67		40.2	15-140	7.24	30	†
2,4-Dinitrotoluene	1.14	0.34	mg/Kg wet	1.67		68.7	40-140	4.36	30	
2,6-Dinitrotoluene	1.17	0.34	mg/Kg wet	1.67		69.9	40-140	6.93	30	
Di-n-octylphthalate	1.30	0.34	mg/Kg wet	1.67		77.8	40-140	10.3	30	
1,2-Diphenylhydrazine/Azobenzene	1.19	0.34	mg/Kg wet	1.67		71.1	40-140	10.5	30	
Fluoranthene	1.11	0.17	mg/Kg wet	1.67		66.6	40-140	5.41	30	
Fluorene	1.13	0.17	mg/Kg wet	1.67		67.9	40-140	5.67	30	
Hexachlorobenzene	1.10	0.34	mg/Kg wet	1.67		65.9	40-140	5.69	30	
Hexachlorobutadiene	0.925	0.34	mg/Kg wet	1.67		55.5	40-140	6.42	30	
Hexachloroethane	0.922	0.34	mg/Kg wet	1.67		55.3	40-140	6.71	30	
Indeno(1,2,3-cd)pyrene	1.21	0.17	mg/Kg wet	1.67		72.5	40-140	6.72	30	
Isophorone	1.09	0.34	mg/Kg wet	1.67		65.7	40-140	7.96	30	
2-Methylnaphthalene	1.07	0.17	mg/Kg wet	1.67		64.2	40-140	5.84	30	
2-Methylphenol	0.840	0.34	mg/Kg wet	1.67		50.4	30-130	5.14	30	V-05
3/4-Methylphenol	1.03	0.34	mg/Kg wet	1.67		62.0	30-130	6.64	30	
Naphthalene	0.981	0.17	mg/Kg wet	1.67		58.8	40-140	5.36	30	
Nitrobenzene	0.976	0.34	mg/Kg wet	1.67		58.5	40-140	7.88	30	
2-Nitrophenol	1.06	0.34	mg/Kg wet	1.67		63.7	30-130	6.12	30	
4-Nitrophenol	1.09	0.66	mg/Kg wet	1.67		65.6	15-140	7.69	30	†
Pentachlorophenol	1.01	0.34	mg/Kg wet	1.67		60.7	30-130	7.17	30	
Phenanthrene	1.14	0.17	mg/Kg wet	1.67		68.7	40-140	6.54	30	
Phenol	1.03	0.34	mg/Kg wet	1.67		62.1	15-140	7.15	30	†
Pyrene	1.20	0.17	mg/Kg wet	1.67		72.3	40-140	9.21	30	
Pyridine	0.609	0.34	mg/Kg wet	1.67		36.6	30-140	10.6	30	†
1,2,4-Trichlorobenzene	0.946	0.34	mg/Kg wet	1.67		56.8	40-140	5.28	30	
2,4,5-Trichlorophenol	1.10	0.34	mg/Kg wet	1.67		66.3	30-130	5.55	30	
2,4,6-Trichlorophenol	1.15	0.34	mg/Kg wet	1.67		68.7	30-130	6.20	30	
Surrogate: 2-Fluorophenol	4.09		mg/Kg wet	6.67		61.4	30-130			
Surrogate: Phenol-d6	4.33		mg/Kg wet	6.67		64.9	30-130			
Surrogate: Nitrobenzene-d5	2.11		mg/Kg wet	3.33		63.4	30-130			
Surrogate: 2-Fluorobiphenyl	2.23		mg/Kg wet	3.33		66.9	30-130			
Surrogate: 2,4,6-Tribromophenol	5.07		mg/Kg wet	6.67		76.0	30-130			
Surrogate: p-Terphenyl-d14	2.60		mg/Kg wet	3.33		77.9	30-130			

**Matrix Spike (B227222-MS1)**

**Source: 19C1572-02**

Prepared: 04/02/19 Analyzed: 04/03/19

Acenaphthene	1.41	0.18	mg/Kg dry	1.73	ND	81.3	40-140			
Acenaphthylene	1.45	0.18	mg/Kg dry	1.73	ND	83.8	40-140			
Acetophenone	1.37	0.35	mg/Kg dry	1.73	ND	79.0	40-140			
Aniline	0.952	0.35	mg/Kg dry	1.73	ND	55.0	40-140			V-34
Anthracene	1.56	0.18	mg/Kg dry	1.73	ND	90.1	40-140			
Benzo(a)anthracene	1.50	0.18	mg/Kg dry	1.73	ND	86.7	40-140			
Benzo(a)pyrene	1.63	0.18	mg/Kg dry	1.73	ND	94.1	40-140			
Benzo(b)fluoranthene	1.60	0.18	mg/Kg dry	1.73	ND	92.6	40-140			
Benzo(g,h,i)perylene	1.71	0.18	mg/Kg dry	1.73	ND	98.8	40-140			
Benzo(k)fluoranthene	1.62	0.18	mg/Kg dry	1.73	ND	93.5	40-140			

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
<b>Batch B227222 - SW-846 3546</b>										
<b>Matrix Spike (B227222-MS1)</b>	<b>Source: 19C1572-02</b>			Prepared: 04/02/19 Analyzed: 04/03/19						
Bis(2-chloroethoxy)methane	1.70	0.35	mg/Kg dry	1.73	ND	98.0	40-140			
Bis(2-chloroethyl)ether	1.39	0.35	mg/Kg dry	1.73	ND	80.5	40-140			
Bis(2-chloroisopropyl)ether	1.64	0.35	mg/Kg dry	1.73	ND	94.6	40-140			
Bis(2-Ethylhexyl)phthalate	1.90	0.35	mg/Kg dry	1.73	ND	110	40-140			
4-Bromophenylphenylether	1.49	0.35	mg/Kg dry	1.73	ND	85.8	40-140			
Butylbenzylphthalate	1.89	0.35	mg/Kg dry	1.73	ND	109	40-140			
4-Chloroaniline	1.06	0.69	mg/Kg dry	1.73	ND	61.3	40-140			V-34
2-Chloronaphthalene	1.33	0.35	mg/Kg dry	1.73	ND	76.7	40-140			
2-Chlorophenol	1.35	0.35	mg/Kg dry	1.73	ND	77.8	30-130			
Chrysene	1.53	0.18	mg/Kg dry	1.73	ND	88.2	40-140			
Dibenz(a,h)anthracene	1.60	0.18	mg/Kg dry	1.73	ND	92.6	40-140			
Dibenzofuran	1.49	0.35	mg/Kg dry	1.73	ND	86.0	40-140			
Di-n-butylphthalate	1.69	0.35	mg/Kg dry	1.73	ND	97.5	40-140			
1,2-Dichlorobenzene	1.05	0.35	mg/Kg dry	1.73	ND	60.6	40-140			
1,3-Dichlorobenzene	0.978	0.35	mg/Kg dry	1.73	ND	56.5	40-140			
1,4-Dichlorobenzene	1.01	0.35	mg/Kg dry	1.73	ND	58.2	40-140			
3,3-Dichlorobenzidine	1.47	0.18	mg/Kg dry	1.73	ND	85.0	40-140			V-34
2,4-Dichlorophenol	1.34	0.35	mg/Kg dry	1.73	ND	77.4	30-130			
Diethylphthalate	1.64	0.35	mg/Kg dry	1.73	ND	94.9	40-140			
2,4-Dimethylphenol	1.36	0.35	mg/Kg dry	1.73	ND	78.6	30-130			
Dimethylphthalate	1.58	0.35	mg/Kg dry	1.73	ND	91.2	40-140			
2,4-Dinitrophenol	0.961	0.69	mg/Kg dry	1.73	ND	55.5	30-130			
2,4-Dinitrotoluene	1.58	0.35	mg/Kg dry	1.73	ND	91.5	40-140			
2,6-Dinitrotoluene	1.60	0.35	mg/Kg dry	1.73	ND	92.2	40-140			
Di-n-octylphthalate	2.33	0.35	mg/Kg dry	1.73	ND	135	40-140			
1,2-Diphenylhydrazine/Azobenzene	1.60	0.35	mg/Kg dry	1.73	ND	92.4	40-140			
Fluoranthene	1.57	0.18	mg/Kg dry	1.73	ND	90.9	40-140			
Fluorene	1.54	0.18	mg/Kg dry	1.73	ND	88.7	40-140			
Hexachlorobenzene	1.43	0.35	mg/Kg dry	1.73	ND	82.7	40-140			
Hexachlorobutadiene	1.18	0.35	mg/Kg dry	1.73	ND	68.4	40-140			
Hexachloroethane	1.06	0.35	mg/Kg dry	1.73	ND	61.0	40-140			
Indeno(1,2,3-cd)pyrene	1.62	0.18	mg/Kg dry	1.73	ND	93.4	40-140			
Isophorone	1.53	0.35	mg/Kg dry	1.73	ND	88.3	40-140			
2-Methylnaphthalene	1.46	0.18	mg/Kg dry	1.73	ND	84.4	40-140			
2-Methylphenol	1.10	0.35	mg/Kg dry	1.73	ND	63.5	30-130			V-05
3/4-Methylphenol	1.38	0.35	mg/Kg dry	1.73	ND	79.5	30-130			
Naphthalene	1.33	0.18	mg/Kg dry	1.73	ND	77.1	40-140			
Nitrobenzene	1.36	0.35	mg/Kg dry	1.73	ND	78.4	40-140			
2-Nitrophenol	1.45	0.35	mg/Kg dry	1.73	ND	84.0	30-130			
4-Nitrophenol	1.71	0.69	mg/Kg dry	1.73	ND	98.6	30-130			
Pentachlorophenol	1.33	0.35	mg/Kg dry	1.73	ND	77.1	30-130			
Phenanthrene	1.56	0.18	mg/Kg dry	1.73	ND	90.1	40-140			
Phenol	1.41	0.35	mg/Kg dry	1.73	ND	81.5	30-130			
Pyrene	1.68	0.18	mg/Kg dry	1.73	ND	96.8	40-140			
1,2,4-Trichlorobenzene	1.26	0.35	mg/Kg dry	1.73	ND	72.8	40-140			
2,4,5-Trichlorophenol	1.49	0.35	mg/Kg dry	1.73	ND	86.0	30-130			
2,4,6-Trichlorophenol	1.55	0.35	mg/Kg dry	1.73	ND	89.4	30-130			
Surrogate: 2-Fluorophenol	4.98		mg/Kg dry	6.92		71.9	30-130			
Surrogate: Phenol-d6	5.80		mg/Kg dry	6.92		83.8	30-130			
Surrogate: Nitrobenzene-d5	2.88		mg/Kg dry	3.46		83.1	30-130			
Surrogate: 2-Fluorobiphenyl	3.06		mg/Kg dry	3.46		88.3	30-130			
Surrogate: 2,4,6-Tribromophenol	6.71		mg/Kg dry	6.92		96.9	30-130			

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
<b>Batch B227222 - SW-846 3546</b>										
<b>Matrix Spike (B227222-MS1)</b>		<b>Source: 19C1572-02</b>			Prepared: 04/02/19 Analyzed: 04/03/19					
Surrogate: p-Terphenyl-d14	3.56		mg/Kg dry	3.46		103	30-130			
<b>Matrix Spike Dup (B227222-MSD1)</b>		<b>Source: 19C1572-02</b>			Prepared: 04/02/19 Analyzed: 04/03/19					
Acenaphthene	1.41	0.18	mg/Kg dry	1.76	ND	80.2	40-140	0.349	30	
Acenaphthylene	1.42	0.18	mg/Kg dry	1.76	ND	80.6	40-140	2.23	30	
Acetophenone	1.35	0.36	mg/Kg dry	1.76	ND	76.9	40-140	0.981	30	
Aniline	0.897	0.36	mg/Kg dry	1.76	ND	51.0	40-140	5.95	30	V-34
Anthracene	1.51	0.18	mg/Kg dry	1.76	ND	85.9	40-140	3.16	30	
Benzo(a)anthracene	1.48	0.18	mg/Kg dry	1.76	ND	84.1	40-140	1.34	30	
Benzo(a)pyrene	1.59	0.18	mg/Kg dry	1.76	ND	90.5	40-140	2.35	30	
Benzo(b)fluoranthene	1.55	0.18	mg/Kg dry	1.76	ND	88.2	40-140	3.23	30	
Benzo(g,h,i)perylene	1.62	0.18	mg/Kg dry	1.76	ND	91.9	40-140	5.56	30	
Benzo(k)fluoranthene	1.58	0.18	mg/Kg dry	1.76	ND	89.9	40-140	2.25	30	
Bis(2-chloroethoxy)methane	1.65	0.36	mg/Kg dry	1.76	ND	93.9	40-140	2.59	30	
Bis(2-chloroethyl)ether	1.41	0.36	mg/Kg dry	1.76	ND	80.1	40-140	1.09	30	
Bis(2-chloroisopropyl)ether	1.67	0.36	mg/Kg dry	1.76	ND	95.0	40-140	2.00	30	
Bis(2-Ethylhexyl)phthalate	1.87	0.36	mg/Kg dry	1.76	ND	106	40-140	1.51	30	
4-Bromophenylphenylether	1.47	0.36	mg/Kg dry	1.76	ND	83.4	40-140	1.29	30	
Butylbenzylphthalate	1.86	0.36	mg/Kg dry	1.76	ND	106	40-140	1.66	30	
4-Chloroaniline	0.978	0.70	mg/Kg dry	1.76	ND	55.6	40-140	8.13	30	V-34
2-Chloronaphthalene	1.28	0.36	mg/Kg dry	1.76	ND	72.8	40-140	3.66	30	
2-Chlorophenol	1.36	0.36	mg/Kg dry	1.76	ND	77.1	30-130	0.707	30	
Chrysene	1.51	0.18	mg/Kg dry	1.76	ND	85.6	40-140	1.26	30	
Dibenz(a,h)anthracene	1.50	0.18	mg/Kg dry	1.76	ND	85.3	40-140	6.48	30	
Dibenzofuran	1.47	0.36	mg/Kg dry	1.76	ND	83.3	40-140	1.55	30	
Di-n-butylphthalate	1.64	0.36	mg/Kg dry	1.76	ND	93.2	40-140	2.90	30	
1,2-Dichlorobenzene	1.12	0.36	mg/Kg dry	1.76	ND	63.8	40-140	6.65	30	
1,3-Dichlorobenzene	1.07	0.36	mg/Kg dry	1.76	ND	60.6	40-140	8.67	30	
1,4-Dichlorobenzene	1.09	0.36	mg/Kg dry	1.76	ND	61.8	40-140	7.57	30	
3,3-Dichlorobenzidine	1.40	0.18	mg/Kg dry	1.76	ND	79.6	40-140	4.88	30	V-34
2,4-Dichlorophenol	1.34	0.36	mg/Kg dry	1.76	ND	76.3	30-130	0.179	30	
Diethylphthalate	1.60	0.36	mg/Kg dry	1.76	ND	90.7	40-140	2.80	30	
2,4-Dimethylphenol	1.32	0.36	mg/Kg dry	1.76	ND	75.2	30-130	2.79	30	
Dimethylphthalate	1.55	0.36	mg/Kg dry	1.76	ND	88.1	40-140	1.89	30	
2,4-Dinitrophenol	0.961	0.70	mg/Kg dry	1.76	ND	54.6	30-130	0.0384	30	
2,4-Dinitrotoluene	1.56	0.36	mg/Kg dry	1.76	ND	88.5	40-140	1.61	30	
2,6-Dinitrotoluene	1.57	0.36	mg/Kg dry	1.76	ND	89.0	40-140	1.85	30	
Di-n-octylphthalate	2.19	0.36	mg/Kg dry	1.76	ND	124	40-140	6.52	30	
1,2-Diphenylhydrazine/Azobenzene	1.57	0.36	mg/Kg dry	1.76	ND	89.3	40-140	1.75	30	
Fluoranthene	1.55	0.18	mg/Kg dry	1.76	ND	88.0	40-140	1.63	30	
Fluorene	1.52	0.18	mg/Kg dry	1.76	ND	86.1	40-140	1.29	30	
Hexachlorobenzene	1.40	0.36	mg/Kg dry	1.76	ND	79.7	40-140	2.06	30	
Hexachlorobutadiene	1.19	0.36	mg/Kg dry	1.76	ND	67.4	40-140	0.223	30	
Hexachloroethane	1.13	0.36	mg/Kg dry	1.76	ND	64.0	40-140	6.56	30	
Indeno(1,2,3-cd)pyrene	1.52	0.18	mg/Kg dry	1.76	ND	86.6	40-140	5.94	30	
Isophorone	1.52	0.36	mg/Kg dry	1.76	ND	86.4	40-140	0.607	30	
2-Methylnaphthalene	1.45	0.18	mg/Kg dry	1.76	ND	82.1	40-140	1.08	30	
2-Methylphenol	1.08	0.36	mg/Kg dry	1.76	ND	61.2	30-130	1.92	30	V-05
3/4-Methylphenol	1.34	0.36	mg/Kg dry	1.76	ND	75.9	30-130	3.05	30	
Naphthalene	1.32	0.18	mg/Kg dry	1.76	ND	74.8	40-140	1.39	30	
Nitrobenzene	1.33	0.36	mg/Kg dry	1.76	ND	75.7	40-140	1.92	30	
2-Nitrophenol	1.44	0.36	mg/Kg dry	1.76	ND	81.7	30-130	1.14	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
<b>Batch B227222 - SW-846 3546</b>										
<b>Matrix Spike Dup (B227222-MSD1)</b>	<b>Source: 19C1572-02</b>			Prepared: 04/02/19 Analyzed: 04/03/19						
4-Nitrophenol	1.62	0.70	mg/Kg dry	1.76	ND	92.1	30-130	5.22	30	
Pentachlorophenol	1.32	0.36	mg/Kg dry	1.76	ND	74.8	30-130	1.34	30	
Phenanthrene	1.52	0.18	mg/Kg dry	1.76	ND	86.4	40-140	2.58	30	
Phenol	1.39	0.36	mg/Kg dry	1.76	ND	79.0	30-130	1.46	30	
Pyrene	1.67	0.18	mg/Kg dry	1.76	ND	95.1	40-140	0.157	30	
1,2,4-Trichlorobenzene	1.25	0.36	mg/Kg dry	1.76	ND	70.9	40-140	0.952	30	
2,4,5-Trichlorophenol	1.47	0.36	mg/Kg dry	1.76	ND	83.4	30-130	1.39	30	
2,4,6-Trichlorophenol	1.53	0.36	mg/Kg dry	1.76	ND	87.1	30-130	0.948	30	
Surrogate: 2-Fluorophenol	5.09		mg/Kg dry	7.04		72.3	30-130			
Surrogate: Phenol-d6	5.72		mg/Kg dry	7.04		81.3	30-130			
Surrogate: Nitrobenzene-d5	2.85		mg/Kg dry	3.52		80.9	30-130			
Surrogate: 2-Fluorobiphenyl	2.99		mg/Kg dry	3.52		85.1	30-130			
Surrogate: 2,4,6-Tribromophenol	6.58		mg/Kg dry	7.04		93.5	30-130			
Surrogate: p-Terphenyl-d14	3.53		mg/Kg dry	3.52		100	30-130			

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**QUALITY CONTROL**

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B227240 - SW-846 3540C</b>										
<b>Blank (B227240-BLK1)</b>										
Prepared: 04/02/19 Analyzed: 04/04/19										
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	0.209		mg/Kg wet	0.200		105	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.207		mg/Kg wet	0.200		103	30-150			
Surrogate: Tetrachloro-m-xylene	0.218		mg/Kg wet	0.200		109	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.220		mg/Kg wet	0.200		110	30-150			
<b>LCS (B227240-BS1)</b>										
Prepared: 04/02/19 Analyzed: 04/04/19										
Aroclor-1016	0.18	0.020	mg/Kg wet	0.200		91.4	40-140			
Aroclor-1016 [2C]	0.16	0.020	mg/Kg wet	0.200		80.2	40-140			
Aroclor-1260	0.18	0.020	mg/Kg wet	0.200		87.9	40-140			
Aroclor-1260 [2C]	0.16	0.020	mg/Kg wet	0.200		79.0	40-140			
Surrogate: Decachlorobiphenyl	0.191		mg/Kg wet	0.200		95.5	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.188		mg/Kg wet	0.200		93.9	30-150			
Surrogate: Tetrachloro-m-xylene	0.192		mg/Kg wet	0.200		96.0	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.190		mg/Kg wet	0.200		94.8	30-150			
<b>LCS Dup (B227240-BSD1)</b>										
Prepared: 04/02/19 Analyzed: 04/04/19										
Aroclor-1016	0.20	0.020	mg/Kg wet	0.200		99.7	40-140	8.74	30	
Aroclor-1016 [2C]	0.18	0.020	mg/Kg wet	0.200		88.1	40-140	9.34	30	
Aroclor-1260	0.19	0.020	mg/Kg wet	0.200		94.4	40-140	7.06	30	
Aroclor-1260 [2C]	0.17	0.020	mg/Kg wet	0.200		85.2	40-140	7.53	30	
Surrogate: Decachlorobiphenyl	0.205		mg/Kg wet	0.200		102	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.202		mg/Kg wet	0.200		101	30-150			
Surrogate: Tetrachloro-m-xylene	0.208		mg/Kg wet	0.200		104	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.208		mg/Kg wet	0.200		104	30-150			

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**QUALITY CONTROL**

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B227240 - SW-846 3540C**

**Matrix Spike (B227240-MS1)**

**Source: 19C1572-01**

Prepared: 04/02/19 Analyzed: 04/04/19

Aroclor-1016	0.21	0.082	mg/Kg dry	0.206	ND	101	40-140			
Aroclor-1016 [2C]	0.19	0.082	mg/Kg dry	0.206	ND	92.5	40-140			
Aroclor-1260	0.20	0.082	mg/Kg dry	0.206	ND	94.7	40-140			
Aroclor-1260 [2C]	0.18	0.082	mg/Kg dry	0.206	ND	85.0	40-140			
Surrogate: Decachlorobiphenyl	0.196		mg/Kg dry	0.206		95.1	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.182		mg/Kg dry	0.206		88.3	30-150			
Surrogate: Tetrachloro-m-xylene	0.201		mg/Kg dry	0.206		97.7	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.196		mg/Kg dry	0.206		95.1	30-150			

**Matrix Spike Dup (B227240-MSD1)**

**Source: 19C1572-01**

Prepared: 04/02/19 Analyzed: 04/04/19

Aroclor-1016	0.22	0.079	mg/Kg dry	0.196	ND	114	40-140	6.50	50	
Aroclor-1016 [2C]	0.19	0.079	mg/Kg dry	0.196	ND	98.8	40-140	1.67	50	
Aroclor-1260	0.19	0.079	mg/Kg dry	0.196	ND	97.8	40-140	1.72	50	
Aroclor-1260 [2C]	0.17	0.079	mg/Kg dry	0.196	ND	88.4	40-140	0.925	50	
Surrogate: Decachlorobiphenyl	0.194		mg/Kg dry	0.196		98.6	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.181		mg/Kg dry	0.196		92.1	30-150			
Surrogate: Tetrachloro-m-xylene	0.207		mg/Kg dry	0.196		105	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.203		mg/Kg dry	0.196		103	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
<b>Batch B227221 - SW-846 3546</b>										
<b>Blank (B227221-BLK1)</b>										
					Prepared: 04/02/19 Analyzed: 04/03/19					
TPH (C9-C36)	ND	8.3	mg/Kg wet							
Surrogate: 2-Fluorobiphenyl	1.65		mg/Kg wet	3.33		49.6	40-140			
<b>LCS (B227221-BS1)</b>										
					Prepared: 04/02/19 Analyzed: 04/03/19					
TPH (C9-C36)	24.6	8.3	mg/Kg wet	33.3		73.8	40-140			
Surrogate: 2-Fluorobiphenyl	2.68		mg/Kg wet	3.33		80.5	40-140			
<b>LCS Dup (B227221-BSD1)</b>										
					Prepared: 04/02/19 Analyzed: 04/03/19					
TPH (C9-C36)	25.8	8.3	mg/Kg wet	33.3		77.3	40-140	4.63	30	
Surrogate: 2-Fluorobiphenyl	2.83		mg/Kg wet	3.33		85.0	40-140			
<b>Matrix Spike (B227221-MS1)</b>										
					Source: 19C1572-01		Prepared: 04/02/19 Analyzed: 04/04/19			
TPH (C9-C36)	29.7	8.4	mg/Kg dry	33.8	6.28	69.3	40-140			
Surrogate: 2-Fluorobiphenyl	2.75		mg/Kg dry	3.38		81.3	40-140			
<b>Matrix Spike Dup (B227221-MSD1)</b>										
					Source: 19C1572-01		Prepared: 04/02/19 Analyzed: 04/04/19			
TPH (C9-C36)	28.2	8.6	mg/Kg dry	34.4	6.28	63.7	40-140	5.31	30	
Surrogate: 2-Fluorobiphenyl	2.69		mg/Kg dry	3.44		78.2	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
<b>Batch B227094 - SW-846 7471</b>										
<b>Blank (B227094-BLK1)</b> Prepared: 04/02/19 Analyzed: 04/03/19										
Mercury	ND	0.025	mg/Kg wet							
<b>LCS (B227094-BS1)</b> Prepared: 04/02/19 Analyzed: 04/03/19										
Mercury	2.63	0.37	mg/Kg wet	3.71		70.8	65-135			
<b>LCS Dup (B227094-BSD1)</b> Prepared: 04/02/19 Analyzed: 04/03/19										
Mercury	3.19	0.37	mg/Kg wet	3.71		86.0	65-135	19.3	30	
<b>Batch B227367 - SW-846 3050B</b>										
<b>Blank (B227367-BLK1)</b> Prepared: 04/03/19 Analyzed: 04/04/19										
Antimony	ND	1.7	mg/Kg wet							
Arsenic	ND	1.7	mg/Kg wet							
Barium	ND	1.7	mg/Kg wet							
Beryllium	ND	0.17	mg/Kg wet							
Cadmium	ND	0.17	mg/Kg wet							
Chromium	ND	0.33	mg/Kg wet							
Lead	ND	0.50	mg/Kg wet							
Nickel	ND	0.33	mg/Kg wet							
Selenium	ND	3.3	mg/Kg wet							
Silver	ND	0.33	mg/Kg wet							
Thallium	ND	1.7	mg/Kg wet							
Vanadium	ND	0.67	mg/Kg wet							
Zinc	ND	0.67	mg/Kg wet							
<b>LCS (B227367-BS1)</b> Prepared: 04/03/19 Analyzed: 04/04/19										
Antimony	64.2	4.8	mg/Kg wet	89.6		71.6	3.3-196.4			
Arsenic	200	4.8	mg/Kg wet	202		99.1	82.7-117.3			
Barium	260	4.8	mg/Kg wet	270		96.2	82.6-117.8			
Beryllium	90.8	0.48	mg/Kg wet	96.8		93.8	83.4-116.7			
Cadmium	128	0.48	mg/Kg wet	141		91.0	83-117			
Chromium	159	0.96	mg/Kg wet	167		95.4	81.4-118			
Lead	70.9	1.4	mg/Kg wet	73.8		96.0	82.9-117.1			
Nickel	85.7	0.96	mg/Kg wet	89.4		95.8	82.9-117.5			
Selenium	50.0	9.6	mg/Kg wet	49.9		100	79.2-120.6			
Silver	72.1	0.96	mg/Kg wet	71.1		101	79.7-120.1			
Thallium	59.2	4.8	mg/Kg wet	58.5		101	80.7-119.5			
Vanadium	52.7	1.9	mg/Kg wet	58.2		90.6	79-121			
Zinc	246	1.9	mg/Kg wet	264		93.2	80.7-119.3			
<b>LCS Dup (B227367-BSD1)</b> Prepared: 04/03/19 Analyzed: 04/04/19										
Antimony	60.6	4.9	mg/Kg wet	89.6		67.7	3.3-196.4	5.72	30	
Arsenic	183	4.9	mg/Kg wet	202		90.4	82.7-117.3	9.17	30	
Barium	240	4.9	mg/Kg wet	270		89.0	82.6-117.8	7.82	30	
Beryllium	85.0	0.49	mg/Kg wet	96.8		87.8	83.4-116.7	6.53	30	
Cadmium	125	0.49	mg/Kg wet	141		88.7	83-117	2.48	30	
Chromium	150	0.97	mg/Kg wet	167		89.6	81.4-118	6.23	30	
Lead	65.4	1.5	mg/Kg wet	73.8		88.6	82.9-117.1	8.08	30	
Nickel	82.6	0.97	mg/Kg wet	89.4		92.4	82.9-117.5	3.57	30	
Selenium	46.8	9.7	mg/Kg wet	49.9		93.8	79.2-120.6	6.57	30	
Silver	66.3	0.97	mg/Kg wet	71.1		93.2	79.7-120.1	8.46	30	
Thallium	56.0	4.9	mg/Kg wet	58.5		95.6	80.7-119.5	5.66	30	
Vanadium	48.9	1.9	mg/Kg wet	58.2		84.1	79-121	7.49	30	
Zinc	232	1.9	mg/Kg wet	264		88.0	80.7-119.3	5.71	30	

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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 B227367 - SW-846 3050B**

**Duplicate (B227367-DUP1)**

**Source: 19C1572-06**

Prepared: 04/03/19 Analyzed: 04/04/19

Antimony	ND	1.8	mg/Kg dry		ND			NC	35	
Arsenic	5.81	1.8	mg/Kg dry		5.00			14.9	35	
Barium	22.7	1.8	mg/Kg dry		20.9			8.09	35	
Beryllium	0.242	0.18	mg/Kg dry		0.252			4.07	35	
Cadmium	0.195	0.18	mg/Kg dry		ND			NC	35	
Chromium	9.31	0.35	mg/Kg dry		9.05			2.80	35	
Lead	4.65	0.53	mg/Kg dry		3.89			17.7	35	
Nickel	7.38	0.35	mg/Kg dry		7.14			3.33	35	
Selenium	ND	3.5	mg/Kg dry		ND			NC	35	
Silver	ND	0.35	mg/Kg dry		ND			NC	35	
Thallium	ND	1.8	mg/Kg dry		ND			NC	35	
Vanadium	12.6	0.71	mg/Kg dry		12.4			2.10	35	
Zinc	17.1	0.71	mg/Kg dry		16.6			2.58	35	

**MRL Check (B227367-MRL1)**

Prepared: 04/03/19 Analyzed: 04/04/19

Lead	0.492	0.48	mg/Kg wet	0.482		102		80-120		
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**Matrix Spike (B227367-MS1)**

**Source: 19C1572-06**

Prepared: 04/03/19 Analyzed: 04/04/19

<b>Antimony</b>	7.26	1.7	mg/Kg dry	17.2	ND	<b>42.2</b>	*	75-125		MS-07
Arsenic	20.8	1.7	mg/Kg dry	17.2	5.00	91.9		75-125		
Barium	39.9	1.7	mg/Kg dry	17.2	20.9	110		75-125		
Beryllium	15.8	0.17	mg/Kg dry	17.2	0.252	90.6		75-125		
Cadmium	15.8	0.17	mg/Kg dry	17.2	0.151	91.2		75-125		
Chromium	25.8	0.34	mg/Kg dry	17.2	9.05	97.3		75-125		
Lead	19.5	0.52	mg/Kg dry	17.2	3.89	90.6		75-125		
Nickel	24.2	0.34	mg/Kg dry	17.2	7.14	99.4		75-125		
Selenium	19.5	3.4	mg/Kg dry	17.2	ND	113		75-125		
Silver	16.7	0.34	mg/Kg dry	17.2	0.306	95.4		75-125		
Thallium	16.4	1.7	mg/Kg dry	17.2	ND	95.1		75-125		
Vanadium	30.1	0.69	mg/Kg dry	17.2	12.4	103		75-125		
Zinc	49.7	0.69	mg/Kg dry	34.4	16.6	96.2		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
<b>Batch B227022 - SW-846 9014</b>										
<b>Blank (B227022-BLK1)</b> Prepared: 03/30/19 Analyzed: 03/31/19										
Reactive Cyanide	ND	0.40	mg/Kg							
<b>LCS (B227022-BS1)</b> Prepared: 03/30/19 Analyzed: 03/31/19										
Reactive Cyanide	9.7	0.40	mg/Kg	10.0		96.9	83.6-111			
<b>Batch B227024 - SW-846 9030A</b>										
<b>Blank (B227024-BLK1)</b> Prepared: 03/30/19 Analyzed: 03/31/19										
Reactive Sulfide	ND	2.0	mg/L							
<b>LCS (B227024-BS1)</b> Prepared: 03/30/19 Analyzed: 03/31/19										
Reactive Sulfide	12	2.0	mg/L	14.8		83.8	54.9-121			
<b>Batch B227052 - SW-846 9045C</b>										
<b>LCS (B227052-BS1)</b> Prepared & Analyzed: 03/30/19										
pH	6.03		pH Units	6.00		101	90-110			
<b>LCS (B227052-BS2)</b> Prepared & Analyzed: 03/30/19										
pH	6.01		pH Units	6.00		100	90-110			
<b>Duplicate (B227052-DUP1)</b> <b>Source: 19C1572-08</b> Prepared & Analyzed: 03/30/19										
pH	6.2		pH Units		6.4			2.53	5	H-03
<b>Batch B227054 - SM21-22 2510B Modified</b>										
<b>Blank (B227054-BLK1)</b> Prepared & Analyzed: 03/31/19										
Specific conductance	ND	2.0	µmhos/cm							
<b>LCS (B227054-BS1)</b> Prepared & Analyzed: 03/31/19										
Specific conductance	190		µmhos/cm	192		99.3	90-110			
<b>Batch B227087 - SM21-22 2510B Modified</b>										
<b>Blank (B227087-BLK1)</b> Prepared & Analyzed: 04/01/19										
Specific conductance	ND	2.0	µmhos/cm							
<b>LCS (B227087-BS1)</b> Prepared & Analyzed: 04/01/19										
Specific conductance	200		µmhos/cm	192		102	90-110			

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

**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 B227087 - SM21-22 2510B Modified**

<b>Duplicate (B227087-DUP1)</b>		<b>Source: 19C1572-06</b>			Prepared & Analyzed: 04/01/19					
Specific conductance	5.0	2.0	µmhos/cm		4.7			5.36	21	

**Batch B227324 - % Solids**

<b>Duplicate (B227324-DUP7)</b>		<b>Source: 19C1572-04</b>			Prepared: 04/03/19 Analyzed: 04/04/19					
% Solids	94.9		% Wt		94.8			0.0636	20	



**IDENTIFICATION SUMMARY  
FOR SINGLE COMPONENT ANALYTES**

LCS

*SW-846 8082A*

Lab Sample ID:           B227240-BS1                                Date(s) Analyzed:           04/04/2019                     04/04/2019          

Instrument ID (1):           ECD5                                                Instrument ID (2):           ECD5          

GC Column (1):                                      ID:                                      (mm)                      GC Column (2):                                      ID:                                      (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.18	
	2	0.000	-0.030	0.030	0.16	11.8
Aroclor-1260	1	0.000	-0.030	0.030	0.18	
	2	0.000	-0.030	0.030	0.16	11.8

**IDENTIFICATION SUMMARY  
FOR SINGLE COMPONENT ANALYTES**

LCS Dup

*SW-846 8082A*

Lab Sample ID:                   B227240-BSD1                                        Date(s) Analyzed:           04/04/2019                     04/04/2019          

Instrument ID (1):                   ECD5                                        Instrument ID (2):                   ECD5                  

GC Column (1):                      ID:                      (mm)                      GC Column (2):                      ID:                      (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.20	
	2	0.000	-0.030	0.030	0.18	10.5
Aroclor-1260	1	0.000	-0.030	0.030	0.19	
	2	0.000	-0.030	0.030	0.17	11.1

**IDENTIFICATION SUMMARY  
FOR SINGLE COMPONENT ANALYTES**  
*SW-846 8082A*

**Matrix Spike**

Lab Sample ID: B227240-MS1 Date(s) Analyzed: 04/04/2019 04/04/2019

Instrument ID (1): ECD5 Instrument ID (2): ECD5

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.21	
	2	0.000	-0.030	0.030	0.19	10.0
Aroclor-1260	1	0.000	-0.030	0.030	0.20	
	2	0.000	-0.030	0.030	0.18	10.5

**IDENTIFICATION SUMMARY  
FOR SINGLE COMPONENT ANALYTES**

**Matrix Spike Dup**

*SW-846 8082A*

Lab Sample ID:                   B227240-MSD1                                        Date(s) Analyzed:           04/04/2019                     04/04/2019          

Instrument ID (1):                   ECD5                                        Instrument ID (2):                   ECD5                  

GC Column (1):                      ID:                      (mm)                      GC Column (2):                      ID:                      (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.22	
	2	0.000	-0.030	0.030	0.19	14.6
Aroclor-1260	1	0.000	-0.030	0.030	0.19	
	2	0.000	-0.030	0.030	0.17	11.1

**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.
H-03	Sample received after recommended holding time was exceeded.
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.
MS-07	Matrix spike recovery is outside of control limits. Analysis is in control based on laboratory fortified blank recovery. Possibility of sample matrix effects that lead to low bias for reported result or non-homogeneous sample aliquot cannot be eliminated.
O-32	A dilution was performed as part of the standard analytical procedure.
V-05	Continuing calibration verification (CCV) did not meet method specifications and was biased on the low side for this compound.
V-16	Response factor is less than method specified minimum acceptable value. Reduced precision and accuracy may be associated with reported result.
V-20	Continuing calibration verification (CCV) 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.

**CERTIFICATIONS**

**Certified Analyses included in this Report**

Analyte	Certifications
<b>SW-846 1030 in Soil</b>	
Ignitability	NY,NH,CT,NC,ME,VA
<b>SW-846 6010D in Soil</b>	
Antimony	CT,NH,NY,ME,VA,NC
Arsenic	CT,NH,NY,ME,VA,NC
Barium	CT,NH,NY,ME,VA,NC
Beryllium	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
Nickel	CT,NH,NY,ME,VA,NC
Selenium	CT,NH,NY,ME,VA,NC
Silver	CT,NH,NY,ME,VA,NC
Thallium	CT,NH,NY,ME,VA,NC
Vanadium	CT,NH,NY,ME,VA,NC
Zinc	CT,NH,NY,ME,VA,NC
<b>SW-846 7471B in Soil</b>	
Mercury	CT,NH,NY,NC,ME,VA
<b>SW-846 8082A in Soil</b>	
Aroclor-1016	CT,NH,NY,ME,NC,VA
Aroclor-1016 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1221	CT,NH,NY,ME,NC,VA
Aroclor-1221 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1232	CT,NH,NY,ME,NC,VA
Aroclor-1232 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1242	CT,NH,NY,ME,NC,VA
Aroclor-1242 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1248	CT,NH,NY,ME,NC,VA
Aroclor-1248 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1254	CT,NH,NY,ME,NC,VA
Aroclor-1254 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1260	CT,NH,NY,ME,NC,VA
Aroclor-1260 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1262	NY,NC,VA
Aroclor-1262 [2C]	NY,NC,VA
Aroclor-1268	NY,NC,VA
Aroclor-1268 [2C]	NY,NC,VA
<b>SW-846 8260C in Soil</b>	
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

## CERTIFICATIONS

## Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8260C in Soil</i>	
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
1,2-Dibromo-3-chloropropane (DBCP)	NY
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
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

**CERTIFICATIONS**

**Certified Analyses included in this Report**

Analyte	Certifications
<b>SW-846 8260C in Soil</b>	
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
<b>SW-846 8270D in Soil</b>	
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
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



**CERTIFICATIONS**

**Certified Analyses included in this Report**

Analyte	Certifications
<i>SW-846 8270D in Soil</i>	
1,2-Diphenylhydrazine/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
2,4,5-Trichlorophenol	CT,NY,NH
2,4,6-Trichlorophenol	CT,NY,NH

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

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2005	100033	03/1/2020
MA	Massachusetts DEP	M-MA100	06/30/2019
CT	Connecticut Department of Public Health	PH-0567	09/30/2019
NY	New York State Department of Health	10899 NELAP	04/1/2020
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2020
RI	Rhode Island Department of Health	LAO00112	12/30/2019
NC	North Carolina Div. of Water Quality	652	12/31/2019
NJ	New Jersey DEP	MA007 NELAP	06/30/2019
FL	Florida Department of Health	E871027 NELAP	06/30/2019
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2019
ME	State of Maine	2011028	06/9/2019
VA	Commonwealth of Virginia	460217	12/14/2019
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2019
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2019
NC-DW	North Carolina Department of Health	25703	07/31/2019

DLH 19C157d  
Phone: 413-525-2332  
Fax: 413-525-6405  
Email: info@contestlabs.com



Address: 100N Washington St, Suite 302, Boston MA  
Phone: 617-275-5407  
Project Location: River's Edge, MA  
Project Number: 400417  
Project Manager: K. Sarson  
Con-Test Quote Name/Number:  
Invoice Recipient: K. Sarson  
Sampled By: K. Sarson

7-Day  10-Day   
Due Date: 5-Day   
1-Day  3-Day   
2-Day  4-Day   
Format: PDF  EXCEL   
Other: EDD   
CLP Like Data Pkg Required:   
Email To: Ksarson@questing.com  
Fax To #:

Con-Test Work Order #	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	Composite	Grab	Matrix Code	Conc Code
1	V-107 (5-10)	3/27/19	1305	X		S	
2	V-108 (0-5)		1315				
3	V-109 (5-10)		1325				
4	V-110 (5-10)		1335				
5	V-111 (0-10)		1345				
6	V-112 (0-5)		1400				
7	V-113 (0-5)	3/28/19	1100				
8	V-114 (5-10)		1135				
9	V-115 (5-10)		1200				
10	V-116 (0-5)		1230				

Matrix Codes:	Preservation Codes:	Container Codes:
GW = Ground Water WW = Waste Water DW = Drinking Water A = Air S = Soil SL = Sludge SOL = Solid O = Other (please define)	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)	A = Amber Glass G = Glass P = Plastic ST = Sterile V = Vial S = Summa Canister T = Tedlar Bag O = Other (please define)

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

**Special Requirements**

MA MCP Required  
 MCP Certification Form Required  
 CT RCP Required  
 RCP Certification Form Required  
 MA State DW Required

PMSID #



**Project Entity**

Government  Municipality  MWRA  WRIA  Other  
 Federal  21 J  School  Chromatogram  
 City  Brownfield  MBTA  AIHA-LAP, LLC

Relinquished by: (signature) Date/Time: 1090  
 Relinquished by: (signature) Date/Time: 1090  
 Relinquished by: (signature) Date/Time: 1910  
 Relinquished by: (signature) Date/Time: 1646  
 Relinquished by: (signature) Date/Time:

I Have Not Confirmed Sample Container Numbers With Lab Staff Before Relinquishing Over Samples \_\_\_\_\_



**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 Verte

Received By SL Date 3/29/19 Time 1040

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 # 3 Actual Temp - 42  
 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? F  
 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? F Who was notified? \_\_\_\_\_  
 Are there Short Holds? F Who was notified? M. V. M.

Is there enough Volume? T  
 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? N/A Acid \_\_\_\_\_ Base \_\_\_\_\_

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

**Comments:**

PH pres hold

## MADEP MCP Analytical Method Report Certification Form

Laboratory Name: Con-Test Analytical Laboratory	Project #: 19C1572
Project Location: Wayland, MA	RTN:

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]

19C1572-01 thru 19C1572-10

Matrices: Soil

**CAM Protocol (check all that below)**

8260 VOC CAM II A (X)	7470/7471 Hg CAM III B (X)	MassDEP VPH CAM IV A ( )	8082 PCB CAM V A (X)	9014 Total Cyanide/PAC CAM VI A ( )	6860 Perchlorate CAM VIII B ( )
8270 SVOC CAM II B (X)	7010 Metals CAM III C ( )	MassDEP VPH CAM IV C ( )	8081 Pesticides CAM V B ( )	7196 Hex Cr CAM VI B ( )	MassDEP APH CAM IX A ( )
6010 Metals CAM III A (X)	6020 Metals CAM III D ( )	MassDEP EPH CAM IV B ( )	8151 Herbicides CAM V C ( )	8330 Explosives CAM VIII A ( )	TO-15 VOC CAM IX B ( )

**Affirmative response to Questions A through F is required for "Presumptive Certainty" status**

<b>A</b>	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?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>B</b>	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>C</b>	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>D</b>	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?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>E a</b>	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).	<input type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>E b</b>	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	<input type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>F</b>	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)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>

**A response to questions G, H and I below is required for "Presumptive Certainty" status**

<b>G</b>	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
----------	---	--

**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.**

<b>H</b>	Were all QC performance standards specified in the CAM protocol(s) achieved?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <sup>1</sup>
<b>I</b>	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>

<sup>1</sup>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: Lisa Worthington

Position: Project Manager

Printed Name: Lisa A. Worthington

Date: 04/05/19

March 8, 2019

Kristen Sarson  
Vertex Engineering - Boston  
100 North Washington St. Suite 302  
Boston, MA 02114

Project Location: Wayland, MA  
Client Job Number:  
Project Number: 46047  
Laboratory Work Order Number: 19C0049

Enclosed are results of analyses for samples received by the laboratory on March 1, 2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Jessica Hoffman". The signature is written in a cursive style with a long, sweeping tail on the "n".

Jessica L. Hoffman  
Project Manager

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Vertex Engineering - Boston  
 100 North Washington St. Suite 302  
 Boston, MA 02114  
 ATTN: Kristen Sarson

REPORT DATE: 3/8/2019

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 46047

**ANALYTICAL SUMMARY**

WORK ORDER NUMBER: 19C0049

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

PROJECT LOCATION: Wayland, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
TP-F8 (0-5)	19C0049-01	Soil		SM 2540G	
				SM21-22 2510B Modified	
				SW-846 1030	
				SW-846 6010D	
				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	
				TP-F8 (5-10)	
SM21-22 2510B Modified					
SW-846 1030					
SW-846 6010D					
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					
TP-E8 (0-5)	19C0049-03	Soil			SM 2540G
				SM21-22 2510B Modified	
				SW-846 1030	
				SW-846 6010D	
				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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**ANALYTICAL SUMMARY**

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FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
TP-E8 (5-10)	19C0049-04	Soil		SM 2540G SM21-22 2510B Modified SW-846 1030 SW-846 6010D 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	
TP-F6 (0-5)	19C0049-05	Soil		SM 2540G SM21-22 2510B Modified SW-846 1030 SW-846 6010D 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	
TP-F6 (5-10)	19C0049-06	Soil		SM 2540G SM21-22 2510B Modified SW-846 1030 SW-846 6010D 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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PROJECT LOCATION: Wayland, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
TP-G6 (0-5)	19C0049-07	Soil		SM 2540G	
				SM21-22 2510B	
				Modified	
				SW-846 1030	
				SW-846 6010D	
				SW-846 7471B	
				SW-846 8082A	
				SW-846 8100 Modified	
				SW-846 8260C	
				SW-846 8270D	
				SW-846 9014	
				SW-846 9030A	
				TP-G6 (5-10)	
SM21-22 2510B					
Modified					
SW-846 1030					
SW-846 6010D					
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					
TP-G7 (0-5)	19C0049-09	Soil		SM 2540G	
				SM21-22 2510B	
				Modified	
				SW-846 1030	
				SW-846 6010D	
				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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WORK ORDER NUMBER: 19C0049

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PROJECT LOCATION: Wayland, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
TP-G7 (5-10)	19C0049-10	Soil		SM 2540G	
				SM21-22 2510B	
				Modified	
				SW-846 1030	
				SW-846 6010D	
				SW-846 7471B	
				SW-846 8082A	
				SW-846 8100 Modified	
				SW-846 8260C	
				SW-846 8270D	
				SW-846 9014	
				SW-846 9030A	
				TP-F7 (0-5)	
SM21-22 2510B					
Modified					
SW-846 1030					
SW-846 6010D					
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					
TP-F7 (5-10)	19C0049-12	Soil		SM 2540G	
				SM21-22 2510B	
				Modified	
				SW-846 1030	
				SW-846 6010D	
				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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PROJECT LOCATION: Wayland, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
TP-E7 (0-5)	19C0049-13	Soil		SM 2540G	
				SM21-22 2510B	
				Modified	
				SW-846 1030	
				SW-846 6010D	
				SW-846 7471B	
				SW-846 8082A	
				SW-846 8100 Modified	
				SW-846 8260C	
				SW-846 8270D	
				SW-846 9014	
				SW-846 9030A	
				TP-E7 (5-10)	
SM21-22 2510B					
Modified					
SW-846 1030					
SW-846 6010D					
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					
TP-E6 (0-5)	19C0049-15	Soil		SM 2540G	
				SM21-22 2510B	
				Modified	
				SW-846 1030	
				SW-846 6010D	
				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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PROJECT LOCATION: Wayland, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
TP-E6 (5-10)	19C0049-16	Soil		SM 2540G SM21-22 2510B Modified SW-846 1030 SW-846 6010D 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	
TP-F5 (0-5)	19C0049-17	Soil		SM 2540G SM21-22 2510B Modified SW-846 1030 SW-846 6010D 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	
TP-F5 (5-10)	19C0049-18	Soil		SM 2540G SM21-22 2510B Modified SW-846 1030 SW-846 6010D 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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PROJECT LOCATION: Wayland, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
TP-E5 (0-5)	19C0049-19	Soil		SM 2540G	
				SM21-22 2510B	
				Modified	
				SW-846 1030	
				SW-846 6010D	
				SW-846 7471B	
				SW-846 8082A	
				SW-846 8100 Modified	
				SW-846 8260C	
				SW-846 8270D	
				SW-846 9014	
				SW-846 9030A	
				TP-E5 (5-10)	
SM21-22 2510B					
Modified					
SW-846 1030					
SW-846 6010D					
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					
TP-E5 (10-15)	19C0049-21	Soil		SM 2540G	
				SM21-22 2510B	
				Modified	
				SW-846 1030	
				SW-846 6010D	
				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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**ANALYTICAL SUMMARY**

WORK ORDER NUMBER: 19C0049

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PROJECT LOCATION: Wayland, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
TP-F4 (0-5)	19C0049-22	Soil		SM 2540G	
				SM21-22 2510B	
				Modified	
				SW-846 1030	
				SW-846 6010D	
				SW-846 7471B	
				SW-846 8082A	
				SW-846 8100 Modified	
				SW-846 8260C	
				SW-846 8270D	
				SW-846 9014	
				SW-846 9030A	
				TP-F4 (5-10)	
SM21-22 2510B					
Modified					
SW-846 1030					
SW-846 6010D					
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					
TP-E4 (0-5)	19C0049-24	Soil		SM 2540G	
				SM21-22 2510B	
				Modified	
				SW-846 1030	
				SW-846 6010D	
				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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REPORT DATE: 3/8/2019

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 46047

**ANALYTICAL SUMMARY**

WORK ORDER NUMBER: 19C0049

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

PROJECT LOCATION: Wayland, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
TP-E4 (5-10)	19C0049-25	Soil		SM 2540G SM21-22 2510B Modified SW-846 1030 SW-846 6010D 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	

**CASE NARRATIVE SUMMARY**

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

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**SM21-22 2510B Modified****Qualifications:**

**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:****Specific conductance**

19C0049-22[TP-F4 (0-5)], B225268-DUP1

**SW-846 6010D****Qualifications:**

**MS-07**  
Matrix spike recovery is outside of control limits. Analysis is in control based on laboratory fortified blank recovery. Possibility of sample matrix effects that lead to low bias for reported result or non-homogeneous sample aliquot cannot be eliminated.

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

19C0049-23[TP-F4 (5-10)], B224899-MS1

**MS-14**

Matrix spike recovery is outside of control limits. Data validation is not affected since sample result is "not detected" and recovery bias is on the high side for this compound.

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

19C0049-23[TP-F4 (5-10)], B224899-MS1

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

**O-32**  
A dilution was performed as part of the standard analytical procedure.

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

19C0049-01[TP-F8 (0-5)], 19C0049-02[TP-F8 (5-10)], 19C0049-03[TP-E8 (0-5)], 19C0049-04[TP-E8 (5-10)], 19C0049-05[TP-F6 (0-5)], 19C0049-06[TP-F6 (5-10)], 19C0049-07[TP-G6 (0-5)], 19C0049-08[TP-G6 (5-10)], 19C0049-09[TP-G7 (0-5)], 19C0049-10[TP-G7 (5-10)], 19C0049-11[TP-F7 (0-5)], 19C0049-12[TP-F7 (5-10)], 19C0049-13[TP-E7 (0-5)], 19C0049-14[TP-E7 (5-10)], 19C0049-15[TP-E6 (0-5)], 19C0049-16[TP-E6 (5-10)], 19C0049-17[TP-F5 (0-5)], 19C0049-18[TP-F5 (5-10)], 19C0049-19[TP-E5 (0-5)], 19C0049-20[TP-E5 (5-10)], 19C0049-21[TP-E5 (10-15)], 19C0049-22[TP-F4 (0-5)], 19C0049-23[TP-F4 (5-10)], 19C0049-24[TP-E4 (0-5)], 19C0049-25[TP-E4 (5-10)]

**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:****Aroclor-1016 [2C]**

19C0049-21[TP-E5 (10-15)], 19C0049-22[TP-F4 (0-5)], 19C0049-23[TP-F4 (5-10)], 19C0049-24[TP-E4 (0-5)], 19C0049-25[TP-E4 (5-10)], B224905-BLK1, B224905-BS1, B224905-BSD1, B224905-MS1, B224905-MSD1

**Aroclor-1260**

19C0049-01[TP-F8 (0-5)], 19C0049-02[TP-F8 (5-10)], 19C0049-03[TP-E8 (0-5)], 19C0049-04[TP-E8 (5-10)], 19C0049-05[TP-F6 (0-5)], 19C0049-06[TP-F6 (5-10)], 19C0049-07[TP-G6 (0-5)], 19C0049-08[TP-G6 (5-10)], 19C0049-09[TP-G7 (0-5)], 19C0049-10[TP-G7 (5-10)], 19C0049-11[TP-F7 (0-5)], 19C0049-12[TP-F7 (5-10)], 19C0049-13[TP-E7 (0-5)], 19C0049-14[TP-E7 (5-10)], 19C0049-15[TP-E6 (0-5)], 19C0049-16[TP-E6 (5-10)], 19C0049-17[TP-F5 (0-5)], 19C0049-18[TP-F5 (5-10)], 19C0049-19[TP-E5 (0-5)], 19C0049-20[TP-E5 (5-10)], 19C0049-21[TP-E5 (10-15)], 19C0049-22[TP-F4 (0-5)], 19C0049-23[TP-F4 (5-10)], 19C0049-24[TP-E4 (0-5)], 19C0049-25[TP-E4 (5-10)], B224905-BLK1, B224905-BS1, B224905-BSD1, B224905-MS1, B224905-MSD1, B224907-BLK1, B224907-BS1, B224907-BSD1, B224907-MS1, B224907-MSD1

**Aroclor-1260 [2C]**

19C0049-01[TP-F8 (0-5)], 19C0049-02[TP-F8 (5-10)], 19C0049-03[TP-E8 (0-5)], 19C0049-04[TP-E8 (5-10)], 19C0049-05[TP-F6 (0-5)], 19C0049-06[TP-F6 (5-10)], 19C0049-07[TP-G6 (0-5)], 19C0049-08[TP-G6 (5-10)], 19C0049-09[TP-G7 (0-5)], 19C0049-10[TP-G7 (5-10)], 19C0049-11[TP-F7 (0-5)], 19C0049-12[TP-F7 (5-10)], 19C0049-13[TP-E7 (0-5)], 19C0049-14[TP-E7 (5-10)], 19C0049-15[TP-E6 (0-5)], 19C0049-16[TP-E6 (5-10)], 19C0049-17[TP-F5 (0-5)], 19C0049-18[TP-F5 (5-10)], 19C0049-19[TP-E5 (0-5)], 19C0049-20[TP-E5 (5-10)], 19C0049-21[TP-E5 (10-15)], 19C0049-22[TP-F4 (0-5)], 19C0049-23[TP-F4 (5-10)], 19C0049-24[TP-E4 (0-5)], 19C0049-25[TP-E4 (5-10)], B224905-BLK1, B224905-BS1, B224905-BSD1, B224905-MS1, B224905-MSD1, B224907-BLK1, B224907-BS1, B224907-BSD1, B224907-MS1, B224907-MSD1

S-26

Surrogate outside of control limits.

**Analyte & Samples(s) Qualified:****Decachlorobiphenyl [2C]**

B224907-BSD1

**Tetrachloro-m-xylene**

B224905-BSD1

**Tetrachloro-m-xylene [2C]**

B224905-BSD1

SW-846 8100 Modified

**Qualifications:**

MS-19

Sample to spike ratio is greater than or equal to 4:1. Spiked amount is not representative of the native amount in the sample. Appropriate or meaningful recoveries cannot be calculated.

**Analyte & Samples(s) Qualified:****TPH (C9-C36)**

B224908-MS1, B224908-MSD1

S-01

The surrogate recovery for this sample is not available due to sample dilution below the surrogate reporting limit required from high analyte concentration and/or matrix interferences.

**Analyte & Samples(s) Qualified:****2-Fluorobiphenyl**

19C0049-02[TP-F8 (5-10)], 19C0049-03[TP-E8 (0-5)], 19C0049-04[TP-E8 (5-10)], 19C0049-05[TP-F6 (0-5)], 19C0049-06[TP-F6 (5-10)], 19C0049-07[TP-G6 (0-5)], 19C0049-08[TP-G6 (5-10)], 19C0049-09[TP-G7 (0-5)], 19C0049-10[TP-G7 (5-10)], 19C0049-11[TP-F7 (0-5)], 19C0049-12[TP-F7 (5-10)], 19C0049-13[TP-E7 (0-5)], 19C0049-15[TP-E6 (0-5)], 19C0049-17[TP-F5 (0-5)], 19C0049-18[TP-F5 (5-10)], 19C0049-19[TP-E5 (0-5)], 19C0049-20[TP-E5 (5-10)]

SW-846 8260C

**Qualifications:**

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:****Acetone**

19C0049-01[TP-F8 (0-5)], 19C0049-02[TP-F8 (5-10)], 19C0049-03[TP-E8 (0-5)], 19C0049-04[TP-E8 (5-10)], 19C0049-05[TP-F6 (0-5)], 19C0049-06[TP-F6 (5-10)], 19C0049-07[TP-G6 (0-5)], 19C0049-08[TP-G6 (5-10)], 19C0049-09[TP-G7 (0-5)], 19C0049-10[TP-G7 (5-10)], 19C0049-11[TP-F7 (0-5)], 19C0049-12[TP-F7 (5-10)], 19C0049-13[TP-E7 (0-5)], 19C0049-14[TP-E7 (5-10)], 19C0049-15[TP-E6 (0-5)], 19C0049-16[TP-E6 (5-10)], B224963-BLK1, B224963-BS1, B224963-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**

19C0049-01[TP-F8 (0-5)], 19C0049-02[TP-F8 (5-10)], 19C0049-03[TP-E8 (0-5)], 19C0049-04[TP-E8 (5-10)], 19C0049-05[TP-F6 (0-5)], 19C0049-06[TP-F6 (5-10)], 19C0049-07[TP-G6 (0-5)], 19C0049-08[TP-G6 (5-10)], 19C0049-09[TP-G7 (0-5)], 19C0049-10[TP-G7 (5-10)], 19C0049-11[TP-F7 (0-5)], 19C0049-12[TP-F7 (5-10)], 19C0049-13[TP-E7 (0-5)], 19C0049-14[TP-E7 (5-10)], 19C0049-15[TP-E6 (0-5)], 19C0049-16[TP-E6 (5-10)], 19C0049-17[TP-F5 (0-5)], 19C0049-18[TP-F5 (5-10)], 19C0049-19[TP-E5 (0-5)], 19C0049-20[TP-E5 (5-10)], 19C0049-21[TP-E5 (10-15)], 19C0049-22[TP-F4 (0-5)], 19C0049-23[TP-F4 (5-10)], 19C0049-24[TP-E4 (0-5)], 19C0049-25[TP-E4 (5-10)], B224963-BLK1, B224963-BS1, B224963-BSD1, B224964-BLK1, B224964-BS1, B224964-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**

19C0049-01[TP-F8 (0-5)], 19C0049-02[TP-F8 (5-10)], 19C0049-03[TP-E8 (0-5)], 19C0049-04[TP-E8 (5-10)], 19C0049-05[TP-F6 (0-5)], 19C0049-06[TP-F6 (5-10)], 19C0049-07[TP-G6 (0-5)], 19C0049-08[TP-G6 (5-10)], 19C0049-09[TP-G7 (0-5)], 19C0049-10[TP-G7 (5-10)], 19C0049-11[TP-F7 (0-5)], 19C0049-12[TP-F7 (5-10)], 19C0049-13[TP-E7 (0-5)], 19C0049-14[TP-E7 (5-10)], 19C0049-15[TP-E6 (0-5)], 19C0049-16[TP-E6 (5-10)], 19C0049-17[TP-F5 (0-5)], 19C0049-18[TP-F5 (5-10)], 19C0049-19[TP-E5 (0-5)], 19C0049-20[TP-E5 (5-10)], 19C0049-21[TP-E5 (10-15)], 19C0049-22[TP-F4 (0-5)], 19C0049-23[TP-F4 (5-10)], 19C0049-24[TP-E4 (0-5)], 19C0049-25[TP-E4 (5-10)], B224963-BLK1, B224963-BS1, B224963-BSD1, B224964-BLK1, B224964-BS1, B224964-BSD1, S033166-CCV1, S033169-CCV1

SW-846 8270D

**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:****Aniline**

19C0049-01[TP-F8 (0-5)], 19C0049-02[TP-F8 (5-10)], 19C0049-03[TP-E8 (0-5)], 19C0049-04[TP-E8 (5-10)], 19C0049-05[TP-F6 (0-5)], 19C0049-06[TP-F6 (5-10)], 19C0049-07[TP-G6 (0-5)], 19C0049-08[TP-G6 (5-10)], 19C0049-09[TP-G7 (0-5)], 19C0049-10[TP-G7 (5-10)], 19C0049-11[TP-F7 (0-5)], 19C0049-12[TP-F7 (5-10)], 19C0049-13[TP-E7 (0-5)], 19C0049-14[TP-E7 (5-10)], 19C0049-15[TP-E6 (0-5)], 19C0049-16[TP-E6 (5-10)], 19C0049-17[TP-F5 (0-5)], 19C0049-18[TP-F5 (5-10)], 19C0049-19[TP-E5 (0-5)], 19C0049-20[TP-E5 (5-10)], B224909-BLK1, B224909-BS1, B224909-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:****Aniline**

B224911-BSD1

**MS-09**

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

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

19C0049-02[TP-F8 (5-10)]

**2,4-Dinitrophenol**

19C0049-22[TP-F4 (0-5)], B224909-MS1, B224909-MSD1, B224911-MS1, B224911-MSD1

**3,3-Dichlorobenzidine**

19C0049-20[TP-E5 (5-10)], 19C0049-22[TP-F4 (0-5)], B224909-MS1, B224909-MSD1, B224911-MS1, B224911-MSD1

**4-Chloroaniline**

19C0049-20[TP-E5 (5-10)], 19C0049-22[TP-F4 (0-5)], B224909-MS1, B224909-MSD1, B224911-MS1, B224911-MSD1

**Aniline**

19C0049-20[TP-E5 (5-10)], 19C0049-22[TP-F4 (0-5)], B224909-MS1, B224909-MSD1, B224911-MS1, B224911-MSD1

**Pentachlorophenol**

19C0049-20[TP-E5 (5-10)], B224909-MS1, B224909-MSD1

**MS-22**

Either matrix spike or MS duplicate is outside of control limits, but the other is within limits. RPD between the two MS/MSD results is within method specified criteria.

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

B224909-MSD1

**Indeno(1,2,3-cd)pyrene**

B224909-MSD1

**RL-08**

Elevated reporting limit due to sample matrix interference. MA CAM reporting limit not met.

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

19C0049-01[TP-F8 (0-5)], 19C0049-02[TP-F8 (5-10)], 19C0049-03[TP-E8 (0-5)], 19C0049-04[TP-E8 (5-10)], 19C0049-05[TP-F6 (0-5)], 19C0049-06[TP-F6 (5-10)], 19C0049-07[TP-G6 (0-5)], 19C0049-08[TP-G6 (5-10)], 19C0049-09[TP-G7 (0-5)], 19C0049-10[TP-G7 (5-10)], 19C0049-11[TP-F7 (0-5)], 19C0049-12[TP-F7 (5-10)], 19C0049-13[TP-E7 (0-5)], 19C0049-14[TP-E7 (5-10)], 19C0049-15[TP-E6 (0-5)], 19C0049-16[TP-E6 (5-10)], 19C0049-17[TP-F5 (0-5)], 19C0049-18[TP-F5 (5-10)], 19C0049-19[TP-E5 (0-5)], 19C0049-20[TP-E5 (5-10)]

**V-05**

Continuing calibration verification (CCV) did not meet method specifications and was biased on the low side for this compound.

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

19C0049-20[TP-E5 (5-10)], 19C0049-24[TP-E4 (0-5)], 19C0049-25[TP-E4 (5-10)], B224909-MS1, B224909-MSD1, S033209-CCV1, S033252-CCV1

**V-06**

Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side for this compound.

**Analyte & Samples(s) Qualified:****1,2-Diphenylhydrazine/Azobenzene**

B224911-BS1, B224911-BSD1, B224911-MS1, B224911-MSD1, S033188-CCV1

**Bis(2-chloroethyl)ether**

B224911-BS1, B224911-BSD1, B224911-MS1, B224911-MSD1, S033188-CCV1

**Isophorone**

B224911-BS1, B224911-BSD1, B224911-MS1, B224911-MSD1, S033188-CCV1

**Nitrobenzene**

B224911-BS1, B224911-BSD1, B224911-MS1, B224911-MSD1, S033188-CCV1

**Phenol**

B224911-BS1, B224911-BSD1, B224911-MS1, B224911-MSD1, S033188-CCV1

**V-20**

Continuing calibration verification (CCV) 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:****1,2-Dichlorobenzene**

S033188-CCV1

**1,2-Diphenylhydrazine/Azobenzene**

19C0049-21[TP-E5 (10-15)], 19C0049-22[TP-F4 (0-5)], 19C0049-23[TP-F4 (5-10)], B224911-BLK1

**Bis(2-chloroethyl)ether**

19C0049-21[TP-E5 (10-15)], 19C0049-22[TP-F4 (0-5)], 19C0049-23[TP-F4 (5-10)], B224911-BLK1

**Isophorone**

19C0049-21[TP-E5 (10-15)], 19C0049-22[TP-F4 (0-5)], 19C0049-23[TP-F4 (5-10)], B224911-BLK1

**Nitrobenzene**

19C0049-21[TP-E5 (10-15)], 19C0049-22[TP-F4 (0-5)], 19C0049-23[TP-F4 (5-10)], B224911-BLK1

**Phenol**

19C0049-21[TP-E5 (10-15)], 19C0049-22[TP-F4 (0-5)], 19C0049-23[TP-F4 (5-10)], B224911-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:****4-Chloroaniline**

19C0049-01[TP-F8 (0-5)], 19C0049-02[TP-F8 (5-10)], 19C0049-03[TP-E8 (0-5)], 19C0049-04[TP-E8 (5-10)], 19C0049-05[TP-F6 (0-5)], 19C0049-06[TP-F6 (5-10)], 19C0049-07[TP-G6 (0-5)], 19C0049-08[TP-G6 (5-10)], 19C0049-09[TP-G7 (0-5)], 19C0049-10[TP-G7 (5-10)], 19C0049-11[TP-F7 (0-5)], 19C0049-12[TP-F7 (5-10)], 19C0049-13[TP-E7 (0-5)], 19C0049-14[TP-E7 (5-10)], 19C0049-15[TP-E6 (0-5)], 19C0049-16[TP-E6 (5-10)], 19C0049-17[TP-F5 (0-5)], 19C0049-18[TP-F5 (5-10)], 19C0049-19[TP-E5 (0-5)], 19C0049-20[TP-E5 (5-10)], 19C0049-21[TP-E5 (10-15)], 19C0049-22[TP-F4 (0-5)], 19C0049-23[TP-F4 (5-10)], 19C0049-24[TP-E4 (0-5)], 19C0049-25[TP-E4 (5-10)], B224909-BLK1, B224909-BS1, B224909-BSD1, B224909-MS1, B224909-MSD1, B224911-BLK1, B224911-BS1, B224911-BSD1, B224911-MS1, B224911-MSD1, S033188-CCV1, S033209-CCV1, S033229-CCV1, S033252-CCV1

**Aniline**

19C0049-01[TP-F8 (0-5)], 19C0049-02[TP-F8 (5-10)], 19C0049-03[TP-E8 (0-5)], 19C0049-04[TP-E8 (5-10)], 19C0049-05[TP-F6 (0-5)], 19C0049-06[TP-F6 (5-10)], 19C0049-07[TP-G6 (0-5)], 19C0049-08[TP-G6 (5-10)], 19C0049-09[TP-G7 (0-5)], 19C0049-10[TP-G7 (5-10)], 19C0049-11[TP-F7 (0-5)], 19C0049-12[TP-F7 (5-10)], 19C0049-13[TP-E7 (0-5)], 19C0049-14[TP-E7 (5-10)], 19C0049-15[TP-E6 (0-5)], 19C0049-16[TP-E6 (5-10)], 19C0049-17[TP-F5 (0-5)], 19C0049-18[TP-F5 (5-10)], 19C0049-19[TP-E5 (0-5)], 19C0049-21[TP-E5 (10-15)], 19C0049-22[TP-F4 (0-5)], 19C0049-23[TP-F4 (5-10)], B224909-BLK1, B224909-BS1, B224909-BSD1, B224911-BLK1, B224911-BS1, B224911-BSD1, B224911-MS1, B224911-MSD1, S033188-CCV1, S033229-CCV1

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**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: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-F8 (0-5)

Sampled: 3/1/2019 07:40

Sample ID: 19C0049-01

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.11	mg/Kg dry	1	R-05	SW-846 8260C	3/5/19	3/5/19 9:01	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.0011	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:01	MFF
Benzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:01	MFF
Bromobenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:01	MFF
Bromochloromethane	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:01	MFF
Bromodichloromethane	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:01	MFF
Bromoform	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:01	MFF
Bromomethane	ND	0.011	mg/Kg dry	1	V-34	SW-846 8260C	3/5/19	3/5/19 9:01	MFF
2-Butanone (MEK)	ND	0.045	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:01	MFF
n-Butylbenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:01	MFF
sec-Butylbenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:01	MFF
tert-Butylbenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:01	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.0011	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:01	MFF
Carbon Disulfide	ND	0.0068	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:01	MFF
Carbon Tetrachloride	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:01	MFF
Chlorobenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:01	MFF
Chlorodibromomethane	ND	0.0011	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:01	MFF
Chloroethane	ND	0.011	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:01	MFF
Chloroform	ND	0.0045	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:01	MFF
Chloromethane	ND	0.011	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:01	MFF
2-Chlorotoluene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:01	MFF
4-Chlorotoluene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:01	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:01	MFF
1,2-Dibromoethane (EDB)	ND	0.0011	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:01	MFF
Dibromomethane	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:01	MFF
1,2-Dichlorobenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:01	MFF
1,3-Dichlorobenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:01	MFF
1,4-Dichlorobenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:01	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.011	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:01	MFF
1,1-Dichloroethane	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:01	MFF
1,2-Dichloroethane	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:01	MFF
1,1-Dichloroethylene	ND	0.0045	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:01	MFF
cis-1,2-Dichloroethylene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:01	MFF
trans-1,2-Dichloroethylene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:01	MFF
1,2-Dichloropropane	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:01	MFF
1,3-Dichloropropane	ND	0.0011	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:01	MFF
2,2-Dichloropropane	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:01	MFF
1,1-Dichloropropene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:01	MFF
cis-1,3-Dichloropropene	ND	0.0011	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:01	MFF
trans-1,3-Dichloropropene	ND	0.0011	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:01	MFF
Diethyl Ether	ND	0.011	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:01	MFF
Diisopropyl Ether (DIPE)	ND	0.0011	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:01	MFF
1,4-Dioxane	ND	0.11	mg/Kg dry	1	V-16	SW-846 8260C	3/5/19	3/5/19 9:01	MFF
Ethylbenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:01	MFF



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-F8 (0-5)

Sampled: 3/1/2019 07:40

Sample ID: 19C0049-01

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:01	MFF
2-Hexanone (MBK)	ND	0.023	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:01	MFF
Isopropylbenzene (Cumene)	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:01	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:01	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0045	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:01	MFF
Methylene Chloride	ND	0.011	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:01	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.023	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:01	MFF
Naphthalene	ND	0.0045	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:01	MFF
n-Propylbenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:01	MFF
Styrene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:01	MFF
1,1,1,2-Tetrachloroethane	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:01	MFF
1,1,1,2,2-Tetrachloroethane	ND	0.0011	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:01	MFF
Tetrachloroethylene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:01	MFF
Tetrahydrofuran	ND	0.011	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:01	MFF
Toluene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:01	MFF
1,2,3-Trichlorobenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:01	MFF
1,2,4-Trichlorobenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:01	MFF
1,1,1-Trichloroethane	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:01	MFF
1,1,2-Trichloroethane	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:01	MFF
Trichloroethylene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:01	MFF
Trichlorofluoromethane (Freon 11)	ND	0.011	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:01	MFF
1,2,3-Trichloropropane	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:01	MFF
1,2,4-Trimethylbenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:01	MFF
1,3,5-Trimethylbenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:01	MFF
Vinyl Chloride	ND	0.011	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:01	MFF
m+p Xylene	ND	0.0045	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:01	MFF
o-Xylene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:01	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	103	70-130	3/5/19 9:01
Toluene-d8	98.9	70-130	3/5/19 9:01
4-Bromofluorobenzene	101	70-130	3/5/19 9:01

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-F8 (0-5)

Sampled: 3/1/2019 07:40

Sample ID: 19C0049-01

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatle Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.38	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 16:54	IMR
Acenaphthylene	ND	0.38	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 16:54	IMR
Acetophenone	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 16:54	IMR
Aniline	ND	0.76	mg/Kg dry	2	L-04, V-34	SW-846 8270D	3/4/19	3/6/19 16:54	IMR
Anthracene	0.46	0.38	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 16:54	IMR
Benzo(a)anthracene	1.3	0.38	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 16:54	IMR
Benzo(a)pyrene	1.3	0.38	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 16:54	IMR
Benzo(b)fluoranthene	1.4	0.38	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 16:54	IMR
Benzo(g,h,i)perylene	0.85	0.38	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 16:54	IMR
Benzo(k)fluoranthene	0.51	0.38	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 16:54	IMR
Bis(2-chloroethoxy)methane	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 16:54	IMR
Bis(2-chloroethyl)ether	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 16:54	IMR
Bis(2-chloroisopropyl)ether	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 16:54	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 16:54	IMR
4-Bromophenylphenylether	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 16:54	IMR
Butylbenzylphthalate	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 16:54	IMR
4-Chloroaniline	ND	1.5	mg/Kg dry	2	V-34	SW-846 8270D	3/4/19	3/6/19 16:54	IMR
2-Chloronaphthalene	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 16:54	IMR
2-Chlorophenol	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 16:54	IMR
Chrysene	1.4	0.38	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 16:54	IMR
Dibenz(a,h)anthracene	ND	0.38	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 16:54	IMR
Dibenzofuran	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 16:54	IMR
Di-n-butylphthalate	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 16:54	IMR
1,2-Dichlorobenzene	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 16:54	IMR
1,3-Dichlorobenzene	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 16:54	IMR
1,4-Dichlorobenzene	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 16:54	IMR
3,3-Dichlorobenzidine	ND	0.38	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 16:54	IMR
2,4-Dichlorophenol	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 16:54	IMR
Diethylphthalate	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 16:54	IMR
2,4-Dimethylphenol	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 16:54	IMR
Dimethylphthalate	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 16:54	IMR
2,4-Dinitrophenol	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 16:54	IMR
2,4-Dinitrotoluene	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 16:54	IMR
2,6-Dinitrotoluene	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 16:54	IMR
Di-n-octylphthalate	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 16:54	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 16:54	IMR
Fluoranthene	2.7	0.38	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 16:54	IMR
Fluorene	ND	0.38	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 16:54	IMR
Hexachlorobenzene	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 16:54	IMR
Hexachlorobutadiene	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 16:54	IMR
Hexachloroethane	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 16:54	IMR
Indeno(1,2,3-cd)pyrene	0.96	0.38	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 16:54	IMR
Isophorone	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 16:54	IMR
2-Methylnaphthalene	ND	0.38	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 16:54	IMR

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-F8 (0-5)

Sampled: 3/1/2019 07:40

Sample ID: 19C0049-01

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 16:54	IMR
3/4-Methylphenol	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 16:54	IMR
Naphthalene	ND	0.38	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 16:54	IMR
Nitrobenzene	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 16:54	IMR
2-Nitrophenol	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 16:54	IMR
4-Nitrophenol	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 16:54	IMR
Pentachlorophenol	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 16:54	IMR
Phenanthrene	2.2	0.38	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 16:54	IMR
Phenol	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 16:54	IMR
Pyrene	3.1	0.38	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 16:54	IMR
1,2,4-Trichlorobenzene	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 16:54	IMR
2,4,5-Trichlorophenol	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 16:54	IMR
2,4,6-Trichlorophenol	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 16:54	IMR
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2-Fluorophenol		54.5	30-130					3/6/19 16:54	
Phenol-d6		53.2	30-130					3/6/19 16:54	
Nitrobenzene-d5		56.1	30-130					3/6/19 16:54	
2-Fluorobiphenyl		58.0	30-130					3/6/19 16:54	
2,4,6-Tribromophenol		54.2	30-130					3/6/19 16:54	
p-Terphenyl-d14		64.1	30-130					3/6/19 16:54	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-F8 (0-5)

Sampled: 3/1/2019 07:40

Sample ID: 19C0049-01

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 22:03	JMB
Aroclor-1221 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 22:03	JMB
Aroclor-1232 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 22:03	JMB
Aroclor-1242 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 22:03	JMB
Aroclor-1248 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 22:03	JMB
Aroclor-1254 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 22:03	JMB
Aroclor-1260 [1]	ND	0.086	mg/Kg dry	4	R-05	SW-846 8082A	3/4/19	3/6/19 22:03	JMB
Aroclor-1262 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 22:03	JMB
Aroclor-1268 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 22:03	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		93.2	30-150					3/6/19 22:03	
Decachlorobiphenyl [2]		95.1	30-150					3/6/19 22:03	
Tetrachloro-m-xylene [1]		95.3	30-150					3/6/19 22:03	
Tetrachloro-m-xylene [2]		88.4	30-150					3/6/19 22:03	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-F8 (0-5)

Sampled: 3/1/2019 07:40

Sample ID: 19C0049-01

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	250	93	mg/Kg dry	10		SW-846 8100 Modified	3/4/19	3/7/19 1:25	RMW
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
2-Fluorobiphenyl	48.3		40-140					3/7/19 1:25	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-F8 (0-5)

Sampled: 3/1/2019 07:40

Sample ID: 19C0049-01

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.8	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:24	QNW
Arsenic	6.4	1.8	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:24	QNW
Barium	38	1.8	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:24	QNW
Beryllium	0.35	0.18	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:24	QNW
Cadmium	0.43	0.18	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:24	QNW
Chromium	14	0.36	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:24	QNW
Lead	74	0.54	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:24	QNW
Mercury	0.050	0.029	mg/Kg dry	1		SW-846 7471B	3/4/19	3/6/19 12:29	TBC
Nickel	11	0.36	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:24	QNW
Selenium	ND	3.6	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:24	QNW
Silver	ND	0.36	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:24	QNW
Thallium	ND	1.8	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:24	QNW
Vanadium	20	0.72	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:24	QNW
Zinc	52	0.72	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:24	QNW

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-F8 (0-5)

Sampled: 3/1/2019 07:40

Sample ID: 19C0049-01

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	89.1		% Wt	1		SM 2540G	3/2/19	3/3/19 14:13	VLH
Ignitability	Absent		present/absent	1		SW-846 1030	3/2/19	3/3/19 15:00	KMV
pH @20.4°C	7.9		pH Units	1		SW-846 9045C	3/1/19	3/1/19 21:58	AIA
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	3/2/19	3/5/19 14:15	DJM
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	3/2/19	3/5/19 13:45	DJM
Specific conductance	8.1	2.0	µmhos/cm	1		SM21-22 2510B Modified	3/7/19	3/7/19 12:00	EC

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-F8 (5-10)

Sampled: 3/1/2019 07:50

Sample ID: 19C0049-02

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.089	mg/Kg dry	1	R-05	SW-846 8260C	3/5/19	3/5/19 9:26	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00089	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:26	MFF
Benzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:26	MFF
Bromobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:26	MFF
Bromochloromethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:26	MFF
Bromodichloromethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:26	MFF
Bromoform	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:26	MFF
Bromomethane	ND	0.0089	mg/Kg dry	1	V-34	SW-846 8260C	3/5/19	3/5/19 9:26	MFF
2-Butanone (MEK)	ND	0.036	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:26	MFF
n-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:26	MFF
sec-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:26	MFF
tert-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:26	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00089	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:26	MFF
Carbon Disulfide	ND	0.0053	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:26	MFF
Carbon Tetrachloride	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:26	MFF
Chlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:26	MFF
Chlorodibromomethane	ND	0.00089	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:26	MFF
Chloroethane	ND	0.0089	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:26	MFF
Chloroform	ND	0.0036	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:26	MFF
Chloromethane	ND	0.0089	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:26	MFF
2-Chlorotoluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:26	MFF
4-Chlorotoluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:26	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:26	MFF
1,2-Dibromoethane (EDB)	ND	0.00089	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:26	MFF
Dibromomethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:26	MFF
1,2-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:26	MFF
1,3-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:26	MFF
1,4-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:26	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0089	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:26	MFF
1,1-Dichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:26	MFF
1,2-Dichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:26	MFF
1,1-Dichloroethylene	ND	0.0036	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:26	MFF
cis-1,2-Dichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:26	MFF
trans-1,2-Dichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:26	MFF
1,2-Dichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:26	MFF
1,3-Dichloropropane	ND	0.00089	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:26	MFF
2,2-Dichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:26	MFF
1,1-Dichloropropene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:26	MFF
cis-1,3-Dichloropropene	ND	0.00089	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:26	MFF
trans-1,3-Dichloropropene	ND	0.00089	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:26	MFF
Diethyl Ether	ND	0.0089	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:26	MFF
Diisopropyl Ether (DIPE)	ND	0.00089	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:26	MFF
1,4-Dioxane	ND	0.089	mg/Kg dry	1	V-16	SW-846 8260C	3/5/19	3/5/19 9:26	MFF
Ethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:26	MFF



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-F8 (5-10)

Sampled: 3/1/2019 07:50

Sample ID: 19C0049-02

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:26	MFF
2-Hexanone (MBK)	ND	0.018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:26	MFF
Isopropylbenzene (Cumene)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:26	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:26	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0036	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:26	MFF
Methylene Chloride	ND	0.0089	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:26	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:26	MFF
Naphthalene	ND	0.0036	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:26	MFF
n-Propylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:26	MFF
Styrene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:26	MFF
1,1,1,2-Tetrachloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:26	MFF
1,1,1,2,2-Tetrachloroethane	ND	0.00089	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:26	MFF
Tetrachloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:26	MFF
Tetrahydrofuran	ND	0.0089	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:26	MFF
Toluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:26	MFF
1,2,3-Trichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:26	MFF
1,2,4-Trichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:26	MFF
1,1,1-Trichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:26	MFF
1,1,2-Trichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:26	MFF
Trichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:26	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0089	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:26	MFF
1,2,3-Trichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:26	MFF
1,2,4-Trimethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:26	MFF
1,3,5-Trimethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:26	MFF
Vinyl Chloride	ND	0.0089	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:26	MFF
m+p Xylene	ND	0.0036	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:26	MFF
o-Xylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:26	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	102	70-130	3/5/19 9:26
Toluene-d8	101	70-130	3/5/19 9:26
4-Bromofluorobenzene	101	70-130	3/5/19 9:26

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-F8 (5-10)

Sampled: 3/1/2019 07:50

Sample ID: 19C0049-02

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.38	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:22	IMR
Acenaphthylene	ND	0.38	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:22	IMR
Acetophenone	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:22	IMR
Aniline	ND	0.76	mg/Kg dry	2	L-04, V-34	SW-846 8270D	3/4/19	3/6/19 17:22	IMR
Anthracene	ND	0.38	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:22	IMR
Benzo(a)anthracene	0.50	0.38	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:22	IMR
Benzo(a)pyrene	0.58	0.38	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:22	IMR
Benzo(b)fluoranthene	0.67	0.38	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:22	IMR
Benzo(g,h,i)perylene	0.43	0.38	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:22	IMR
Benzo(k)fluoranthene	ND	0.38	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:22	IMR
Bis(2-chloroethoxy)methane	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:22	IMR
Bis(2-chloroethyl)ether	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:22	IMR
Bis(2-chloroisopropyl)ether	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:22	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:22	IMR
4-Bromophenylphenylether	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:22	IMR
Butylbenzylphthalate	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:22	IMR
4-Chloroaniline	ND	1.5	mg/Kg dry	2	V-34	SW-846 8270D	3/4/19	3/6/19 17:22	IMR
2-Chloronaphthalene	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:22	IMR
2-Chlorophenol	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:22	IMR
Chrysene	0.57	0.38	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:22	IMR
Dibenz(a,h)anthracene	ND	0.38	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:22	IMR
Dibenzofuran	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:22	IMR
Di-n-butylphthalate	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:22	IMR
1,2-Dichlorobenzene	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:22	IMR
1,3-Dichlorobenzene	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:22	IMR
1,4-Dichlorobenzene	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:22	IMR
3,3-Dichlorobenzidine	ND	0.38	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:22	IMR
2,4-Dichlorophenol	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:22	IMR
Diethylphthalate	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:22	IMR
2,4-Dimethylphenol	ND	0.76	mg/Kg dry	2	MS-09	SW-846 8270D	3/4/19	3/6/19 17:22	IMR
Dimethylphthalate	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:22	IMR
2,4-Dinitrophenol	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:22	IMR
2,4-Dinitrotoluene	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:22	IMR
2,6-Dinitrotoluene	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:22	IMR
Di-n-octylphthalate	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:22	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:22	IMR
Fluoranthene	0.89	0.38	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:22	IMR
Fluorene	ND	0.38	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:22	IMR
Hexachlorobenzene	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:22	IMR
Hexachlorobutadiene	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:22	IMR
Hexachloroethane	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:22	IMR
Indeno(1,2,3-cd)pyrene	0.44	0.38	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:22	IMR
Isophorone	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:22	IMR
2-Methylnaphthalene	ND	0.38	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:22	IMR

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-F8 (5-10)

Sampled: 3/1/2019 07:50

Sample ID: 19C0049-02

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:22	IMR
3/4-Methylphenol	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:22	IMR
Naphthalene	ND	0.38	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:22	IMR
Nitrobenzene	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:22	IMR
2-Nitrophenol	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:22	IMR
4-Nitrophenol	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:22	IMR
Pentachlorophenol	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:22	IMR
Phenanthrene	0.40	0.38	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:22	IMR
Phenol	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:22	IMR
Pyrene	1.1	0.38	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:22	IMR
1,2,4-Trichlorobenzene	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:22	IMR
2,4,5-Trichlorophenol	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:22	IMR
2,4,6-Trichlorophenol	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:22	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	58.1	30-130	
Phenol-d6	59.6	30-130	
Nitrobenzene-d5	58.4	30-130	
2-Fluorobiphenyl	63.2	30-130	
2,4,6-Tribromophenol	62.1	30-130	
p-Terphenyl-d14	71.9	30-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-F8 (5-10)

Sampled: 3/1/2019 07:50

Sample ID: 19C0049-02

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 22:21	JMB
Aroclor-1221 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 22:21	JMB
Aroclor-1232 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 22:21	JMB
Aroclor-1242 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 22:21	JMB
Aroclor-1248 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 22:21	JMB
Aroclor-1254 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 22:21	JMB
Aroclor-1260 [1]	ND	0.084	mg/Kg dry	4	R-05	SW-846 8082A	3/4/19	3/6/19 22:21	JMB
Aroclor-1262 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 22:21	JMB
Aroclor-1268 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 22:21	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		91.2	30-150					3/6/19 22:21	
Decachlorobiphenyl [2]		91.2	30-150					3/6/19 22:21	
Tetrachloro-m-xylene [1]		94.9	30-150					3/6/19 22:21	
Tetrachloro-m-xylene [2]		88.6	30-150					3/6/19 22:21	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-F8 (5-10)

Sampled: 3/1/2019 07:50

Sample ID: 19C0049-02

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	380	190	mg/Kg dry	20		SW-846 8100 Modified	3/4/19	3/7/19 2:26	RMW
Surrogates	% Recovery		Recovery Limits	Flag/Qual					
2-Fluorobiphenyl	*		40-140	S-01		3/7/19 2:26			

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-F8 (5-10)

Sampled: 3/1/2019 07:50

Sample ID: 19C0049-02

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.8	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:29	QNW
Arsenic	6.9	1.8	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:29	QNW
Barium	34	1.8	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:29	QNW
Beryllium	0.35	0.18	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:29	QNW
Cadmium	0.45	0.18	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:29	QNW
Chromium	15	0.37	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:29	QNW
Lead	69	0.55	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:29	QNW
Mercury	0.041	0.028	mg/Kg dry	1		SW-846 7471B	3/4/19	3/6/19 12:30	TBC
Nickel	12	0.37	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:29	QNW
Selenium	ND	3.7	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:29	QNW
Silver	ND	0.37	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:29	QNW
Thallium	ND	1.8	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:29	QNW
Vanadium	21	0.74	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:29	QNW
Zinc	55	0.74	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:29	QNW

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-F8 (5-10)

Sampled: 3/1/2019 07:50

Sample ID: 19C0049-02

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	89.6		% Wt	1		SM 2540G	3/2/19	3/3/19 14:13	VLH
Ignitability	Absent		present/absent	1		SW-846 1030	3/2/19	3/3/19 15:00	KMV
pH @19.5°C	8.0		pH Units	1		SW-846 9045C	3/1/19	3/1/19 21:58	AIA
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	3/2/19	3/5/19 14:15	DJM
Reactive Sulfide	ND	19	mg/Kg	1		SW-846 9030A	3/2/19	3/5/19 13:45	DJM
Specific conductance	16	2.0	µmhos/cm	1		SM21-22 2510B Modified	3/7/19	3/7/19 12:00	EC

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-E8 (0-5)

Sampled: 3/1/2019 08:15

Sample ID: 19C0049-03

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.086	mg/Kg dry	1	R-05	SW-846 8260C	3/5/19	3/5/19 9:51	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00086	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
Benzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
Bromobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
Bromochloromethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
Bromodichloromethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
Bromoform	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
Bromomethane	ND	0.0086	mg/Kg dry	1	V-34	SW-846 8260C	3/5/19	3/5/19 9:51	MFF
2-Butanone (MEK)	ND	0.034	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
n-Butylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
sec-Butylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
tert-Butylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00086	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
Carbon Disulfide	ND	0.0052	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
Carbon Tetrachloride	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
Chlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
Chlorodibromomethane	ND	0.00086	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
Chloroethane	ND	0.0086	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
Chloroform	ND	0.0034	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
Chloromethane	ND	0.0086	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
2-Chlorotoluene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
4-Chlorotoluene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
1,2-Dibromoethane (EDB)	ND	0.00086	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
Dibromomethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
1,2-Dichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
1,3-Dichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
1,4-Dichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0086	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
1,1-Dichloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
1,2-Dichloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
1,1-Dichloroethylene	ND	0.0034	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
cis-1,2-Dichloroethylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
trans-1,2-Dichloroethylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
1,2-Dichloropropane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
1,3-Dichloropropane	ND	0.00086	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
2,2-Dichloropropane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
1,1-Dichloropropene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
cis-1,3-Dichloropropene	ND	0.00086	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
trans-1,3-Dichloropropene	ND	0.00086	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
Diethyl Ether	ND	0.0086	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
Diisopropyl Ether (DIPE)	ND	0.00086	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
1,4-Dioxane	ND	0.086	mg/Kg dry	1	V-16	SW-846 8260C	3/5/19	3/5/19 9:51	MFF
Ethylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-E8 (0-5)

Sampled: 3/1/2019 08:15

Sample ID: 19C0049-03

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
2-Hexanone (MBK)	ND	0.017	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
Isopropylbenzene (Cumene)	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0034	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
Methylene Chloride	ND	0.0086	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.017	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
Naphthalene	ND	0.0034	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
n-Propylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
Styrene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
1,1,1,2-Tetrachloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
1,1,2,2-Tetrachloroethane	ND	0.00086	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
Tetrachloroethylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
Tetrahydrofuran	ND	0.0086	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
Toluene	0.0021	0.0017	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
1,2,3-Trichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
1,2,4-Trichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
1,1,1-Trichloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
1,1,2-Trichloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
Trichloroethylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0086	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
1,2,3-Trichloropropane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
1,2,4-Trimethylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
1,3,5-Trimethylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
Vinyl Chloride	ND	0.0086	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
m+p Xylene	ND	0.0034	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
o-Xylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	101	70-130	3/5/19 9:51
Toluene-d8	98.6	70-130	3/5/19 9:51
4-Bromofluorobenzene	101	70-130	3/5/19 9:51

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-E8 (0-5)

Sampled: 3/1/2019 08:15

Sample ID: 19C0049-03

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatle Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.38	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:50	IMR
Acenaphthylene	ND	0.38	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:50	IMR
Acetophenone	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:50	IMR
Aniline	ND	0.76	mg/Kg dry	2	L-04, V-34	SW-846 8270D	3/4/19	3/6/19 17:50	IMR
Anthracene	0.90	0.38	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:50	IMR
Benzo(a)anthracene	1.6	0.38	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:50	IMR
Benzo(a)pyrene	1.5	0.38	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:50	IMR
Benzo(b)fluoranthene	1.7	0.38	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:50	IMR
Benzo(g,h,i)perylene	0.89	0.38	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:50	IMR
Benzo(k)fluoranthene	0.62	0.38	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:50	IMR
Bis(2-chloroethoxy)methane	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:50	IMR
Bis(2-chloroethyl)ether	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:50	IMR
Bis(2-chloroisopropyl)ether	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:50	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:50	IMR
4-Bromophenylphenylether	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:50	IMR
Butylbenzylphthalate	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:50	IMR
4-Chloroaniline	ND	1.5	mg/Kg dry	2	V-34	SW-846 8270D	3/4/19	3/6/19 17:50	IMR
2-Chloronaphthalene	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:50	IMR
2-Chlorophenol	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:50	IMR
Chrysene	1.5	0.38	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:50	IMR
Dibenz(a,h)anthracene	ND	0.38	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:50	IMR
Dibenzofuran	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:50	IMR
Di-n-butylphthalate	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:50	IMR
1,2-Dichlorobenzene	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:50	IMR
1,3-Dichlorobenzene	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:50	IMR
1,4-Dichlorobenzene	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:50	IMR
3,3-Dichlorobenzidine	ND	0.38	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:50	IMR
2,4-Dichlorophenol	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:50	IMR
Diethylphthalate	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:50	IMR
2,4-Dimethylphenol	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:50	IMR
Dimethylphthalate	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:50	IMR
2,4-Dinitrophenol	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:50	IMR
2,4-Dinitrotoluene	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:50	IMR
2,6-Dinitrotoluene	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:50	IMR
Di-n-octylphthalate	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:50	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:50	IMR
Fluoranthene	3.7	0.38	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:50	IMR
Fluorene	0.47	0.38	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:50	IMR
Hexachlorobenzene	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:50	IMR
Hexachlorobutadiene	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:50	IMR
Hexachloroethane	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:50	IMR
Indeno(1,2,3-cd)pyrene	1.0	0.38	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:50	IMR
Isophorone	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:50	IMR
2-Methylnaphthalene	ND	0.38	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:50	IMR

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-E8 (0-5)

Sampled: 3/1/2019 08:15

Sample ID: 19C0049-03

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:50	IMR
3/4-Methylphenol	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:50	IMR
Naphthalene	ND	0.38	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:50	IMR
Nitrobenzene	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:50	IMR
2-Nitrophenol	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:50	IMR
4-Nitrophenol	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:50	IMR
Pentachlorophenol	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:50	IMR
Phenanthrene	3.3	0.38	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:50	IMR
Phenol	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:50	IMR
Pyrene	3.6	0.38	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:50	IMR
1,2,4-Trichlorobenzene	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:50	IMR
2,4,5-Trichlorophenol	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:50	IMR
2,4,6-Trichlorophenol	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 17:50	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	58.7	30-130	
Phenol-d6	59.1	30-130	
Nitrobenzene-d5	60.9	30-130	
2-Fluorobiphenyl	62.9	30-130	
2,4,6-Tribromophenol	58.9	30-130	
p-Terphenyl-d14	71.4	30-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-E8 (0-5)

Sampled: 3/1/2019 08:15

Sample ID: 19C0049-03

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 22:38	JMB
Aroclor-1221 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 22:38	JMB
Aroclor-1232 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 22:38	JMB
Aroclor-1242 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 22:38	JMB
Aroclor-1248 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 22:38	JMB
Aroclor-1254 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 22:38	JMB
Aroclor-1260 [1]	ND	0.090	mg/Kg dry	4	R-05	SW-846 8082A	3/4/19	3/6/19 22:38	JMB
Aroclor-1262 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 22:38	JMB
Aroclor-1268 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 22:38	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		89.6	30-150					3/6/19 22:38	
Decachlorobiphenyl [2]		87.8	30-150					3/6/19 22:38	
Tetrachloro-m-xylene [1]		94.0	30-150					3/6/19 22:38	
Tetrachloro-m-xylene [2]		85.6	30-150					3/6/19 22:38	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-E8 (0-5)

Sampled: 3/1/2019 08:15

Sample ID: 19C0049-03

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	370	190	mg/Kg dry	20		SW-846 8100 Modified	3/4/19	3/7/19 2:46	RMW
Surrogates	% Recovery		Recovery Limits	Flag/Qual					
2-Fluorobiphenyl	*		40-140	S-01		3/7/19 2:46			

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-E8 (0-5)

Sampled: 3/1/2019 08:15

Sample ID: 19C0049-03

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.9	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:34	QNW
Arsenic	6.4	1.9	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:34	QNW
Barium	31	1.9	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:34	QNW
Beryllium	0.33	0.19	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:34	QNW
Cadmium	0.42	0.19	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:34	QNW
Chromium	15	0.38	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:34	QNW
Lead	59	0.57	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:34	QNW
Mercury	0.040	0.027	mg/Kg dry	1		SW-846 7471B	3/4/19	3/6/19 12:32	TBC
Nickel	12	0.38	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:34	QNW
Selenium	ND	3.8	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:34	QNW
Silver	ND	0.38	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:34	QNW
Thallium	ND	1.9	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:34	QNW
Vanadium	22	0.76	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:34	QNW
Zinc	51	0.76	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:34	QNW

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-E8 (0-5)

Sampled: 3/1/2019 08:15

Sample ID: 19C0049-03

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	87.8		% Wt	1		SM 2540G	3/2/19	3/3/19 14:13	VLH
Ignitability	Absent		present/absent	1		SW-846 1030	3/2/19	3/3/19 15:00	KMV
pH @20.5°C	8.2		pH Units	1		SW-846 9045C	3/1/19	3/1/19 21:58	AIA
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	3/2/19	3/5/19 14:15	DJM
Reactive Sulfide	ND	19	mg/Kg	1		SW-846 9030A	3/2/19	3/5/19 13:45	DJM
Specific conductance	11	2.0	µmhos/cm	1		SM21-22 2510B Modified	3/7/19	3/7/19 12:00	EC

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-E8 (5-10)

Sampled: 3/1/2019 08:25

Sample ID: 19C0049-04

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.13	mg/Kg dry	1	R-05	SW-846 8260C	3/5/19	3/5/19 10:15	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.0013	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:15	MFF
Benzene	ND	0.0026	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:15	MFF
Bromobenzene	ND	0.0026	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:15	MFF
Bromochloromethane	ND	0.0026	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:15	MFF
Bromodichloromethane	ND	0.0026	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:15	MFF
Bromoform	ND	0.0026	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:15	MFF
Bromomethane	ND	0.013	mg/Kg dry	1	V-34	SW-846 8260C	3/5/19	3/5/19 10:15	MFF
2-Butanone (MEK)	ND	0.051	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:15	MFF
n-Butylbenzene	ND	0.0026	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:15	MFF
sec-Butylbenzene	ND	0.0026	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:15	MFF
tert-Butylbenzene	ND	0.0026	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:15	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.0013	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:15	MFF
Carbon Disulfide	ND	0.0077	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:15	MFF
Carbon Tetrachloride	ND	0.0026	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:15	MFF
Chlorobenzene	ND	0.0026	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:15	MFF
Chlorodibromomethane	ND	0.0013	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:15	MFF
Chloroethane	ND	0.013	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:15	MFF
Chloroform	ND	0.0051	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:15	MFF
Chloromethane	ND	0.013	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:15	MFF
2-Chlorotoluene	ND	0.0026	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:15	MFF
4-Chlorotoluene	ND	0.0026	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:15	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0026	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:15	MFF
1,2-Dibromoethane (EDB)	ND	0.0013	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:15	MFF
Dibromomethane	ND	0.0026	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:15	MFF
1,2-Dichlorobenzene	ND	0.0026	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:15	MFF
1,3-Dichlorobenzene	ND	0.0026	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:15	MFF
1,4-Dichlorobenzene	ND	0.0026	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:15	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.013	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:15	MFF
1,1-Dichloroethane	ND	0.0026	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:15	MFF
1,2-Dichloroethane	ND	0.0026	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:15	MFF
1,1-Dichloroethylene	ND	0.0051	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:15	MFF
cis-1,2-Dichloroethylene	ND	0.0026	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:15	MFF
trans-1,2-Dichloroethylene	ND	0.0026	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:15	MFF
1,2-Dichloropropane	ND	0.0026	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:15	MFF
1,3-Dichloropropane	ND	0.0013	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:15	MFF
2,2-Dichloropropane	ND	0.0026	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:15	MFF
1,1-Dichloropropene	ND	0.0026	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:15	MFF
cis-1,3-Dichloropropene	ND	0.0013	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:15	MFF
trans-1,3-Dichloropropene	ND	0.0013	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:15	MFF
Diethyl Ether	ND	0.013	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:15	MFF
Diisopropyl Ether (DIPE)	ND	0.0013	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:15	MFF
1,4-Dioxane	ND	0.13	mg/Kg dry	1	V-16	SW-846 8260C	3/5/19	3/5/19 10:15	MFF
Ethylbenzene	ND	0.0026	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:15	MFF



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-E8 (5-10)

Sampled: 3/1/2019 08:25

Sample ID: 19C0049-04

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0026	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:15	MFF
2-Hexanone (MBK)	ND	0.026	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:15	MFF
Isopropylbenzene (Cumene)	ND	0.0026	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:15	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0026	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:15	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0051	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:15	MFF
Methylene Chloride	ND	0.013	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:15	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.026	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:15	MFF
Naphthalene	ND	0.0051	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:15	MFF
n-Propylbenzene	ND	0.0026	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:15	MFF
Styrene	ND	0.0026	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:15	MFF
1,1,1,2-Tetrachloroethane	ND	0.0026	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:15	MFF
1,1,2,2-Tetrachloroethane	ND	0.0013	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:15	MFF
Tetrachloroethylene	ND	0.0026	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:15	MFF
Tetrahydrofuran	ND	0.013	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:15	MFF
Toluene	0.0036	0.0026	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:15	MFF
1,2,3-Trichlorobenzene	ND	0.0026	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:15	MFF
1,2,4-Trichlorobenzene	ND	0.0026	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:15	MFF
1,1,1-Trichloroethane	ND	0.0026	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:15	MFF
1,1,2-Trichloroethane	ND	0.0026	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:15	MFF
Trichloroethylene	ND	0.0026	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:15	MFF
Trichlorofluoromethane (Freon 11)	ND	0.013	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:15	MFF
1,2,3-Trichloropropane	ND	0.0026	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:15	MFF
1,2,4-Trimethylbenzene	ND	0.0026	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:15	MFF
1,3,5-Trimethylbenzene	ND	0.0026	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:15	MFF
Vinyl Chloride	ND	0.013	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:15	MFF
m+p Xylene	ND	0.0051	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:15	MFF
o-Xylene	ND	0.0026	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:15	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	104	70-130	
Toluene-d8	99.5	70-130	
4-Bromofluorobenzene	102	70-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-E8 (5-10)

Sampled: 3/1/2019 08:25

Sample ID: 19C0049-04

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatle Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.39	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:17	IMR
Acenaphthylene	ND	0.39	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:17	IMR
Acetophenone	ND	0.78	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:17	IMR
Aniline	ND	0.78	mg/Kg dry	2	L-04, V-34	SW-846 8270D	3/4/19	3/6/19 18:17	IMR
Anthracene	ND	0.39	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:17	IMR
Benzo(a)anthracene	0.45	0.39	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:17	IMR
Benzo(a)pyrene	0.53	0.39	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:17	IMR
Benzo(b)fluoranthene	0.60	0.39	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:17	IMR
Benzo(g,h,i)perylene	ND	0.39	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:17	IMR
Benzo(k)fluoranthene	ND	0.39	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:17	IMR
Bis(2-chloroethoxy)methane	ND	0.78	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:17	IMR
Bis(2-chloroethyl)ether	ND	0.78	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:17	IMR
Bis(2-chloroisopropyl)ether	ND	0.78	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:17	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.78	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:17	IMR
4-Bromophenylphenylether	ND	0.78	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:17	IMR
Butylbenzylphthalate	ND	0.78	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:17	IMR
4-Chloroaniline	ND	1.5	mg/Kg dry	2	V-34	SW-846 8270D	3/4/19	3/6/19 18:17	IMR
2-Chloronaphthalene	ND	0.78	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:17	IMR
2-Chlorophenol	ND	0.78	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:17	IMR
Chrysene	0.48	0.39	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:17	IMR
Dibenz(a,h)anthracene	ND	0.39	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:17	IMR
Dibenzofuran	ND	0.78	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:17	IMR
Di-n-butylphthalate	ND	0.78	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:17	IMR
1,2-Dichlorobenzene	ND	0.78	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:17	IMR
1,3-Dichlorobenzene	ND	0.78	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:17	IMR
1,4-Dichlorobenzene	ND	0.78	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:17	IMR
3,3-Dichlorobenzidine	ND	0.39	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:17	IMR
2,4-Dichlorophenol	ND	0.78	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:17	IMR
Diethylphthalate	ND	0.78	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:17	IMR
2,4-Dimethylphenol	ND	0.78	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:17	IMR
Dimethylphthalate	ND	0.78	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:17	IMR
2,4-Dinitrophenol	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:17	IMR
2,4-Dinitrotoluene	ND	0.78	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:17	IMR
2,6-Dinitrotoluene	ND	0.78	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:17	IMR
Di-n-octylphthalate	ND	0.78	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:17	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.78	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:17	IMR
Fluoranthene	0.75	0.39	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:17	IMR
Fluorene	ND	0.39	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:17	IMR
Hexachlorobenzene	ND	0.78	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:17	IMR
Hexachlorobutadiene	ND	0.78	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:17	IMR
Hexachloroethane	ND	0.78	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:17	IMR
Indeno(1,2,3-cd)pyrene	ND	0.39	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:17	IMR
Isophorone	ND	0.78	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:17	IMR
2-Methylnaphthalene	ND	0.39	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:17	IMR

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-E8 (5-10)

Sampled: 3/1/2019 08:25

Sample ID: 19C0049-04

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	0.78	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:17	IMR
3/4-Methylphenol	ND	0.78	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:17	IMR
Naphthalene	ND	0.39	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:17	IMR
Nitrobenzene	ND	0.78	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:17	IMR
2-Nitrophenol	ND	0.78	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:17	IMR
4-Nitrophenol	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:17	IMR
Pentachlorophenol	ND	0.78	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:17	IMR
Phenanthrene	ND	0.39	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:17	IMR
Phenol	ND	0.78	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:17	IMR
Pyrene	0.95	0.39	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:17	IMR
1,2,4-Trichlorobenzene	ND	0.78	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:17	IMR
2,4,5-Trichlorophenol	ND	0.78	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:17	IMR
2,4,6-Trichlorophenol	ND	0.78	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:17	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	51.4	30-130	
Phenol-d6	52.2	30-130	
Nitrobenzene-d5	52.3	30-130	
2-Fluorobiphenyl	56.4	30-130	
2,4,6-Tribromophenol	55.6	30-130	
p-Terphenyl-d14	69.0	30-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-E8 (5-10)

Sampled: 3/1/2019 08:25

Sample ID: 19C0049-04

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 22:56	JMB
Aroclor-1221 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 22:56	JMB
Aroclor-1232 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 22:56	JMB
Aroclor-1242 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 22:56	JMB
Aroclor-1248 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 22:56	JMB
Aroclor-1254 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 22:56	JMB
Aroclor-1260 [1]	ND	0.089	mg/Kg dry	4	R-05	SW-846 8082A	3/4/19	3/6/19 22:56	JMB
Aroclor-1262 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 22:56	JMB
Aroclor-1268 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 22:56	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		90.1	30-150					3/6/19 22:56	
Decachlorobiphenyl [2]		85.9	30-150					3/6/19 22:56	
Tetrachloro-m-xylene [1]		95.8	30-150					3/6/19 22:56	
Tetrachloro-m-xylene [2]		88.5	30-150					3/6/19 22:56	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-E8 (5-10)

Sampled: 3/1/2019 08:25

Sample ID: 19C0049-04

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	300	190	mg/Kg dry	20		SW-846 8100 Modified	3/4/19	3/7/19 3:06	RMW
Surrogates	% Recovery		Recovery Limits	Flag/Qual					
2-Fluorobiphenyl	*		40-140	S-01		3/7/19 3:06			

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-E8 (5-10)

Sampled: 3/1/2019 08:25

Sample ID: 19C0049-04

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.9	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:39	QNW
Arsenic	6.6	1.9	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:39	QNW
Barium	32	1.9	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:39	QNW
Beryllium	0.34	0.19	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:39	QNW
Cadmium	0.43	0.19	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:39	QNW
Chromium	16	0.38	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:39	QNW
Lead	41	0.57	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:39	QNW
Mercury	0.036	0.029	mg/Kg dry	1		SW-846 7471B	3/4/19	3/6/19 12:27	TBC
Nickel	12	0.38	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:39	QNW
Selenium	ND	3.8	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:39	QNW
Silver	ND	0.38	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:39	QNW
Thallium	ND	1.9	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:39	QNW
Vanadium	24	0.76	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:39	QNW
Zinc	48	0.76	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:39	QNW

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-E8 (5-10)

Sampled: 3/1/2019 08:25

Sample ID: 19C0049-04

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	86.7		% Wt	1		SM 2540G	3/2/19	3/3/19 14:13	VLH
Ignitability	Absent		present/absent	1		SW-846 1030	3/2/19	3/3/19 15:00	KMV
pH @19.2°C	8.3		pH Units	1		SW-846 9045C	3/1/19	3/1/19 21:15	AIA
Reactive Cyanide	ND	4.0	mg/Kg	1		SW-846 9014	3/2/19	3/5/19 14:15	DJM
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	3/2/19	3/5/19 13:45	DJM
Specific conductance	9.8	2.0	µmhos/cm	1		SM21-22 2510B Modified	3/7/19	3/7/19 12:00	EC

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-F6 (0-5)

Sampled: 3/1/2019 08:55

Sample ID: 19C0049-05

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.081	mg/Kg dry	1	R-05	SW-846 8260C	3/5/19	3/5/19 10:40	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00081	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:40	MFF
Benzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:40	MFF
Bromobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:40	MFF
Bromochloromethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:40	MFF
Bromodichloromethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:40	MFF
Bromoform	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:40	MFF
Bromomethane	ND	0.0081	mg/Kg dry	1	V-34	SW-846 8260C	3/5/19	3/5/19 10:40	MFF
2-Butanone (MEK)	ND	0.032	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:40	MFF
n-Butylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:40	MFF
sec-Butylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:40	MFF
tert-Butylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:40	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00081	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:40	MFF
Carbon Disulfide	ND	0.0048	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:40	MFF
Carbon Tetrachloride	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:40	MFF
Chlorobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:40	MFF
Chlorodibromomethane	ND	0.00081	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:40	MFF
Chloroethane	ND	0.0081	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:40	MFF
Chloroform	ND	0.0032	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:40	MFF
Chloromethane	ND	0.0081	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:40	MFF
2-Chlorotoluene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:40	MFF
4-Chlorotoluene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:40	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:40	MFF
1,2-Dibromoethane (EDB)	ND	0.00081	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:40	MFF
Dibromomethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:40	MFF
1,2-Dichlorobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:40	MFF
1,3-Dichlorobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:40	MFF
1,4-Dichlorobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:40	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0081	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:40	MFF
1,1-Dichloroethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:40	MFF
1,2-Dichloroethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:40	MFF
1,1-Dichloroethylene	ND	0.0032	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:40	MFF
cis-1,2-Dichloroethylene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:40	MFF
trans-1,2-Dichloroethylene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:40	MFF
1,2-Dichloropropane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:40	MFF
1,3-Dichloropropane	ND	0.00081	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:40	MFF
2,2-Dichloropropane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:40	MFF
1,1-Dichloropropene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:40	MFF
cis-1,3-Dichloropropene	ND	0.00081	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:40	MFF
trans-1,3-Dichloropropene	ND	0.00081	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:40	MFF
Diethyl Ether	ND	0.0081	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:40	MFF
Diisopropyl Ether (DIPE)	ND	0.00081	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:40	MFF
1,4-Dioxane	ND	0.081	mg/Kg dry	1	V-16	SW-846 8260C	3/5/19	3/5/19 10:40	MFF
Ethylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:40	MFF



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-F6 (0-5)

Sampled: 3/1/2019 08:55

Sample ID: 19C0049-05

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:40	MFF
2-Hexanone (MBK)	ND	0.016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:40	MFF
Isopropylbenzene (Cumene)	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:40	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:40	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0032	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:40	MFF
Methylene Chloride	ND	0.0081	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:40	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:40	MFF
Naphthalene	ND	0.0032	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:40	MFF
n-Propylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:40	MFF
Styrene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:40	MFF
1,1,1,2-Tetrachloroethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:40	MFF
1,1,2,2-Tetrachloroethane	ND	0.00081	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:40	MFF
Tetrachloroethylene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:40	MFF
Tetrahydrofuran	ND	0.0081	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:40	MFF
Toluene	0.0026	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:40	MFF
1,2,3-Trichlorobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:40	MFF
1,2,4-Trichlorobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:40	MFF
1,1,1-Trichloroethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:40	MFF
1,1,2-Trichloroethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:40	MFF
Trichloroethylene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:40	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0081	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:40	MFF
1,2,3-Trichloropropane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:40	MFF
1,2,4-Trimethylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:40	MFF
1,3,5-Trimethylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:40	MFF
Vinyl Chloride	ND	0.0081	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:40	MFF
m+p Xylene	ND	0.0032	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:40	MFF
o-Xylene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:40	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	101	70-130	3/5/19 10:40
Toluene-d8	99.7	70-130	3/5/19 10:40
4-Bromofluorobenzene	101	70-130	3/5/19 10:40

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-F6 (0-5)

Sampled: 3/1/2019 08:55

Sample ID: 19C0049-05

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatle Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.37	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:45	IMR
Acenaphthylene	ND	0.37	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:45	IMR
Acetophenone	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:45	IMR
Aniline	ND	0.75	mg/Kg dry	2	L-04, V-34	SW-846 8270D	3/4/19	3/6/19 18:45	IMR
Anthracene	ND	0.37	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:45	IMR
Benzo(a)anthracene	1.1	0.37	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:45	IMR
Benzo(a)pyrene	1.2	0.37	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:45	IMR
Benzo(b)fluoranthene	1.4	0.37	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:45	IMR
Benzo(g,h,i)perylene	0.65	0.37	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:45	IMR
Benzo(k)fluoranthene	0.53	0.37	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:45	IMR
Bis(2-chloroethoxy)methane	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:45	IMR
Bis(2-chloroethyl)ether	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:45	IMR
Bis(2-chloroisopropyl)ether	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:45	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:45	IMR
4-Bromophenylphenylether	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:45	IMR
Butylbenzylphthalate	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:45	IMR
4-Chloroaniline	ND	1.5	mg/Kg dry	2	V-34	SW-846 8270D	3/4/19	3/6/19 18:45	IMR
2-Chloronaphthalene	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:45	IMR
2-Chlorophenol	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:45	IMR
Chrysene	1.2	0.37	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:45	IMR
Dibenz(a,h)anthracene	ND	0.37	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:45	IMR
Dibenzofuran	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:45	IMR
Di-n-butylphthalate	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:45	IMR
1,2-Dichlorobenzene	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:45	IMR
1,3-Dichlorobenzene	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:45	IMR
1,4-Dichlorobenzene	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:45	IMR
3,3-Dichlorobenzidine	ND	0.37	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:45	IMR
2,4-Dichlorophenol	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:45	IMR
Diethylphthalate	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:45	IMR
2,4-Dimethylphenol	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:45	IMR
Dimethylphthalate	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:45	IMR
2,4-Dinitrophenol	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:45	IMR
2,4-Dinitrotoluene	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:45	IMR
2,6-Dinitrotoluene	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:45	IMR
Di-n-octylphthalate	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:45	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:45	IMR
Fluoranthene	2.2	0.37	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:45	IMR
Fluorene	ND	0.37	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:45	IMR
Hexachlorobenzene	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:45	IMR
Hexachlorobutadiene	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:45	IMR
Hexachloroethane	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:45	IMR
Indeno(1,2,3-cd)pyrene	0.69	0.37	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:45	IMR
Isophorone	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:45	IMR
2-Methylnaphthalene	ND	0.37	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:45	IMR

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-F6 (0-5)

Sampled: 3/1/2019 08:55

Sample ID: 19C0049-05

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:45	IMR
3/4-Methylphenol	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:45	IMR
Naphthalene	ND	0.37	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:45	IMR
Nitrobenzene	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:45	IMR
2-Nitrophenol	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:45	IMR
4-Nitrophenol	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:45	IMR
Pentachlorophenol	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:45	IMR
Phenanthrene	1.1	0.37	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:45	IMR
Phenol	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:45	IMR
Pyrene	2.3	0.37	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:45	IMR
1,2,4-Trichlorobenzene	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:45	IMR
2,4,5-Trichlorophenol	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:45	IMR
2,4,6-Trichlorophenol	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 18:45	IMR
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2-Fluorophenol		40.8	30-130					3/6/19 18:45	
Phenol-d6		39.5	30-130					3/6/19 18:45	
Nitrobenzene-d5		44.5	30-130					3/6/19 18:45	
2-Fluorobiphenyl		46.0	30-130					3/6/19 18:45	
2,4,6-Tribromophenol		32.7	30-130					3/6/19 18:45	
p-Terphenyl-d14		52.8	30-130					3/6/19 18:45	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-F6 (0-5)

Sampled: 3/1/2019 08:55

Sample ID: 19C0049-05

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.087	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 23:13	JMB
Aroclor-1221 [1]	ND	0.087	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 23:13	JMB
Aroclor-1232 [1]	ND	0.087	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 23:13	JMB
Aroclor-1242 [1]	ND	0.087	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 23:13	JMB
Aroclor-1248 [1]	ND	0.087	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 23:13	JMB
Aroclor-1254 [1]	ND	0.087	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 23:13	JMB
Aroclor-1260 [1]	ND	0.087	mg/Kg dry	4	R-05	SW-846 8082A	3/4/19	3/6/19 23:13	JMB
Aroclor-1262 [1]	ND	0.087	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 23:13	JMB
Aroclor-1268 [1]	ND	0.087	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 23:13	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		88.1	30-150					3/6/19 23:13	
Decachlorobiphenyl [2]		83.8	30-150					3/6/19 23:13	
Tetrachloro-m-xylene [1]		97.3	30-150					3/6/19 23:13	
Tetrachloro-m-xylene [2]		89.9	30-150					3/6/19 23:13	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-F6 (0-5)

Sampled: 3/1/2019 08:55

Sample ID: 19C0049-05

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	420	180	mg/Kg dry	20		SW-846 8100 Modified	3/4/19	3/7/19 3:27	RMW
Surrogates	% Recovery		Recovery Limits	Flag/Qual					
2-Fluorobiphenyl	*		40-140	S-01		3/7/19 3:27			

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-F6 (0-5)

Sampled: 3/1/2019 08:55

Sample ID: 19C0049-05

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.8	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:44	QNW
Arsenic	4.1	1.8	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:44	QNW
Barium	46	1.8	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:44	QNW
Beryllium	0.31	0.18	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:44	QNW
Cadmium	0.37	0.18	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:44	QNW
Chromium	18	0.37	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:44	QNW
Lead	63	0.55	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:44	QNW
Mercury	0.039	0.029	mg/Kg dry	1		SW-846 7471B	3/4/19	3/6/19 12:34	TBC
Nickel	13	0.37	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:44	QNW
Selenium	ND	3.7	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:44	QNW
Silver	ND	0.37	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:44	QNW
Thallium	ND	1.8	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:44	QNW
Vanadium	26	0.73	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:44	QNW
Zinc	60	0.73	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:44	QNW

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-F6 (0-5)

Sampled: 3/1/2019 08:55

Sample ID: 19C0049-05

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	89.7		% Wt	1		SM 2540G	3/2/19	3/3/19 14:14	VLH
Ignitability	Absent		present/absent	1		SW-846 1030	3/2/19	3/3/19 15:00	KMV
pH @19.6°C	8.4		pH Units	1		SW-846 9045C	3/1/19	3/1/19 21:15	AIA
Reactive Cyanide	ND	4.0	mg/Kg	1		SW-846 9014	3/2/19	3/5/19 14:15	DJM
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	3/2/19	3/5/19 13:45	DJM
Specific conductance	19	2.0	µmhos/cm	1		SM21-22 2510B Modified	3/7/19	3/7/19 12:00	EC

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-F6 (5-10)

Sampled: 3/1/2019 09:00

Sample ID: 19C0049-06

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.12	mg/Kg dry	1	R-05	SW-846 8260C	3/5/19	3/5/19 11:04	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:04	MFF
Benzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:04	MFF
Bromobenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:04	MFF
Bromochloromethane	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:04	MFF
Bromodichloromethane	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:04	MFF
Bromoform	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:04	MFF
Bromomethane	ND	0.012	mg/Kg dry	1	V-34	SW-846 8260C	3/5/19	3/5/19 11:04	MFF
2-Butanone (MEK)	ND	0.048	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:04	MFF
n-Butylbenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:04	MFF
sec-Butylbenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:04	MFF
tert-Butylbenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:04	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:04	MFF
Carbon Disulfide	ND	0.0072	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:04	MFF
Carbon Tetrachloride	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:04	MFF
Chlorobenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:04	MFF
Chlorodibromomethane	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:04	MFF
Chloroethane	ND	0.012	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:04	MFF
Chloroform	ND	0.0048	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:04	MFF
Chloromethane	ND	0.012	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:04	MFF
2-Chlorotoluene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:04	MFF
4-Chlorotoluene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:04	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:04	MFF
1,2-Dibromoethane (EDB)	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:04	MFF
Dibromomethane	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:04	MFF
1,2-Dichlorobenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:04	MFF
1,3-Dichlorobenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:04	MFF
1,4-Dichlorobenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:04	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.012	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:04	MFF
1,1-Dichloroethane	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:04	MFF
1,2-Dichloroethane	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:04	MFF
1,1-Dichloroethylene	ND	0.0048	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:04	MFF
cis-1,2-Dichloroethylene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:04	MFF
trans-1,2-Dichloroethylene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:04	MFF
1,2-Dichloropropane	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:04	MFF
1,3-Dichloropropane	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:04	MFF
2,2-Dichloropropane	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:04	MFF
1,1-Dichloropropene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:04	MFF
cis-1,3-Dichloropropene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:04	MFF
trans-1,3-Dichloropropene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:04	MFF
Diethyl Ether	ND	0.012	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:04	MFF
Diisopropyl Ether (DIPE)	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:04	MFF
1,4-Dioxane	ND	0.12	mg/Kg dry	1	V-16	SW-846 8260C	3/5/19	3/5/19 11:04	MFF
Ethylbenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:04	MFF



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-F6 (5-10)

Sampled: 3/1/2019 09:00

Sample ID: 19C0049-06

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:04	MFF
2-Hexanone (MBK)	ND	0.024	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:04	MFF
Isopropylbenzene (Cumene)	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:04	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:04	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0048	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:04	MFF
Methylene Chloride	ND	0.012	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:04	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.024	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:04	MFF
Naphthalene	ND	0.0048	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:04	MFF
n-Propylbenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:04	MFF
Styrene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:04	MFF
1,1,1,2-Tetrachloroethane	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:04	MFF
1,1,2,2-Tetrachloroethane	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:04	MFF
Tetrachloroethylene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:04	MFF
Tetrahydrofuran	ND	0.012	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:04	MFF
Toluene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:04	MFF
1,2,3-Trichlorobenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:04	MFF
1,2,4-Trichlorobenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:04	MFF
1,1,1-Trichloroethane	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:04	MFF
1,1,2-Trichloroethane	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:04	MFF
Trichloroethylene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:04	MFF
Trichlorofluoromethane (Freon 11)	ND	0.012	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:04	MFF
1,2,3-Trichloropropane	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:04	MFF
1,2,4-Trimethylbenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:04	MFF
1,3,5-Trimethylbenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:04	MFF
Vinyl Chloride	ND	0.012	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:04	MFF
m+p Xylene	ND	0.0048	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:04	MFF
o-Xylene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:04	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	101	70-130	3/5/19 11:04
Toluene-d8	99.9	70-130	3/5/19 11:04
4-Bromofluorobenzene	101	70-130	3/5/19 11:04

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-F6 (5-10)

Sampled: 3/1/2019 09:00

Sample ID: 19C0049-06

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatle Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.40	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:13	IMR
Acenaphthylene	ND	0.40	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:13	IMR
Acetophenone	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:13	IMR
Aniline	ND	0.79	mg/Kg dry	2	L-04, V-34	SW-846 8270D	3/4/19	3/6/19 19:13	IMR
Anthracene	ND	0.40	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:13	IMR
Benzo(a)anthracene	1.2	0.40	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:13	IMR
Benzo(a)pyrene	1.3	0.40	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:13	IMR
Benzo(b)fluoranthene	1.6	0.40	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:13	IMR
Benzo(g,h,i)perylene	0.68	0.40	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:13	IMR
Benzo(k)fluoranthene	0.66	0.40	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:13	IMR
Bis(2-chloroethoxy)methane	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:13	IMR
Bis(2-chloroethyl)ether	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:13	IMR
Bis(2-chloroisopropyl)ether	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:13	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:13	IMR
4-Bromophenylphenylether	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:13	IMR
Butylbenzylphthalate	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:13	IMR
4-Chloroaniline	ND	1.5	mg/Kg dry	2	V-34	SW-846 8270D	3/4/19	3/6/19 19:13	IMR
2-Chloronaphthalene	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:13	IMR
2-Chlorophenol	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:13	IMR
Chrysene	1.4	0.40	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:13	IMR
Dibenz(a,h)anthracene	ND	0.40	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:13	IMR
Dibenzofuran	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:13	IMR
Di-n-butylphthalate	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:13	IMR
1,2-Dichlorobenzene	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:13	IMR
1,3-Dichlorobenzene	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:13	IMR
1,4-Dichlorobenzene	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:13	IMR
3,3-Dichlorobenzidine	ND	0.40	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:13	IMR
2,4-Dichlorophenol	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:13	IMR
Diethylphthalate	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:13	IMR
2,4-Dimethylphenol	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:13	IMR
Dimethylphthalate	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:13	IMR
2,4-Dinitrophenol	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:13	IMR
2,4-Dinitrotoluene	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:13	IMR
2,6-Dinitrotoluene	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:13	IMR
Di-n-octylphthalate	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:13	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:13	IMR
Fluoranthene	2.7	0.40	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:13	IMR
Fluorene	ND	0.40	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:13	IMR
Hexachlorobenzene	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:13	IMR
Hexachlorobutadiene	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:13	IMR
Hexachloroethane	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:13	IMR
Indeno(1,2,3-cd)pyrene	0.75	0.40	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:13	IMR
Isophorone	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:13	IMR
2-Methylnaphthalene	ND	0.40	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:13	IMR

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-F6 (5-10)

Sampled: 3/1/2019 09:00

Sample ID: 19C0049-06

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:13	IMR
3/4-Methylphenol	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:13	IMR
Naphthalene	ND	0.40	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:13	IMR
Nitrobenzene	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:13	IMR
2-Nitrophenol	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:13	IMR
4-Nitrophenol	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:13	IMR
Pentachlorophenol	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:13	IMR
Phenanthrene	1.6	0.40	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:13	IMR
Phenol	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:13	IMR
Pyrene	2.8	0.40	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:13	IMR
1,2,4-Trichlorobenzene	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:13	IMR
2,4,5-Trichlorophenol	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:13	IMR
2,4,6-Trichlorophenol	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:13	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	42.5	30-130	
Phenol-d6	40.4	30-130	
Nitrobenzene-d5	45.2	30-130	
2-Fluorobiphenyl	45.2	30-130	
2,4,6-Tribromophenol	38.6	30-130	
p-Terphenyl-d14	51.5	30-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-F6 (5-10)

Sampled: 3/1/2019 09:00

Sample ID: 19C0049-06

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 23:31	JMB
Aroclor-1221 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 23:31	JMB
Aroclor-1232 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 23:31	JMB
Aroclor-1242 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 23:31	JMB
Aroclor-1248 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 23:31	JMB
Aroclor-1254 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 23:31	JMB
Aroclor-1260 [1]	ND	0.090	mg/Kg dry	4	R-05	SW-846 8082A	3/4/19	3/6/19 23:31	JMB
Aroclor-1262 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 23:31	JMB
Aroclor-1268 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 23:31	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		91.3	30-150					3/6/19 23:31	
Decachlorobiphenyl [2]		88.7	30-150					3/6/19 23:31	
Tetrachloro-m-xylene [1]		101	30-150					3/6/19 23:31	
Tetrachloro-m-xylene [2]		92.5	30-150					3/6/19 23:31	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-F6 (5-10)

Sampled: 3/1/2019 09:00

Sample ID: 19C0049-06

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	510	190	mg/Kg dry	20		SW-846 8100 Modified	3/4/19	3/7/19 3:47	RMW
Surrogates	% Recovery		Recovery Limits	Flag/Qual					
2-Fluorobiphenyl	*		40-140	S-01		3/7/19 3:47			

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-F6 (5-10)

Sampled: 3/1/2019 09:00

Sample ID: 19C0049-06

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.9	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:49	QNW
Arsenic	4.5	1.9	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:49	QNW
Barium	37	1.9	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:49	QNW
Beryllium	0.32	0.19	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:49	QNW
Cadmium	0.55	0.19	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:49	QNW
Chromium	16	0.38	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:49	QNW
Lead	51	0.57	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:49	QNW
Mercury	0.048	0.031	mg/Kg dry	1		SW-846 7471B	3/4/19	3/6/19 12:35	TBC
Nickel	14	0.38	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:49	QNW
Selenium	ND	3.8	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:49	QNW
Silver	ND	0.38	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:49	QNW
Thallium	ND	1.9	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:49	QNW
Vanadium	25	0.76	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:49	QNW
Zinc	66	0.76	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:49	QNW

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-F6 (5-10)

Sampled: 3/1/2019 09:00

Sample ID: 19C0049-06

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	84.8		% Wt	1		SM 2540G	3/2/19	3/3/19 14:14	VLH
Ignitability	Absent		present/absent	1		SW-846 1030	3/2/19	3/3/19 15:00	KMV
pH @19.9°C	8.6		pH Units	1		SW-846 9045C	3/1/19	3/1/19 21:58	AIA
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	3/2/19	3/5/19 14:15	DJM
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	3/2/19	3/5/19 13:45	DJM
Specific conductance	21	2.0	µmhos/cm	1		SM21-22 2510B Modified	3/7/19	3/7/19 12:00	EC

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-G6 (0-5)

Sampled: 3/1/2019 09:25

Sample ID: 19C0049-07

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.12	mg/Kg dry	1	R-05	SW-846 8260C	3/5/19	3/5/19 11:29	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:29	MFF
Benzene	ND	0.0025	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:29	MFF
Bromobenzene	ND	0.0025	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:29	MFF
Bromochloromethane	ND	0.0025	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:29	MFF
Bromodichloromethane	ND	0.0025	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:29	MFF
Bromoform	ND	0.0025	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:29	MFF
Bromomethane	ND	0.012	mg/Kg dry	1	V-34	SW-846 8260C	3/5/19	3/5/19 11:29	MFF
2-Butanone (MEK)	ND	0.049	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:29	MFF
n-Butylbenzene	ND	0.0025	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:29	MFF
sec-Butylbenzene	ND	0.0025	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:29	MFF
tert-Butylbenzene	ND	0.0025	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:29	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:29	MFF
Carbon Disulfide	ND	0.0074	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:29	MFF
Carbon Tetrachloride	ND	0.0025	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:29	MFF
Chlorobenzene	ND	0.0025	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:29	MFF
Chlorodibromomethane	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:29	MFF
Chloroethane	ND	0.012	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:29	MFF
Chloroform	ND	0.0049	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:29	MFF
Chloromethane	ND	0.012	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:29	MFF
2-Chlorotoluene	ND	0.0025	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:29	MFF
4-Chlorotoluene	ND	0.0025	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:29	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0025	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:29	MFF
1,2-Dibromoethane (EDB)	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:29	MFF
Dibromomethane	ND	0.0025	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:29	MFF
1,2-Dichlorobenzene	ND	0.0025	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:29	MFF
1,3-Dichlorobenzene	ND	0.0025	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:29	MFF
1,4-Dichlorobenzene	ND	0.0025	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:29	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.012	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:29	MFF
1,1-Dichloroethane	ND	0.0025	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:29	MFF
1,2-Dichloroethane	ND	0.0025	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:29	MFF
1,1-Dichloroethylene	ND	0.0049	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:29	MFF
cis-1,2-Dichloroethylene	ND	0.0025	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:29	MFF
trans-1,2-Dichloroethylene	ND	0.0025	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:29	MFF
1,2-Dichloropropane	ND	0.0025	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:29	MFF
1,3-Dichloropropane	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:29	MFF
2,2-Dichloropropane	ND	0.0025	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:29	MFF
1,1-Dichloropropene	ND	0.0025	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:29	MFF
cis-1,3-Dichloropropene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:29	MFF
trans-1,3-Dichloropropene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:29	MFF
Diethyl Ether	ND	0.012	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:29	MFF
Diisopropyl Ether (DIPE)	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:29	MFF
1,4-Dioxane	ND	0.12	mg/Kg dry	1	V-16	SW-846 8260C	3/5/19	3/5/19 11:29	MFF
Ethylbenzene	ND	0.0025	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:29	MFF



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-G6 (0-5)

Sampled: 3/1/2019 09:25

Sample ID: 19C0049-07

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0025	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:29	MFF
2-Hexanone (MBK)	ND	0.025	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:29	MFF
Isopropylbenzene (Cumene)	ND	0.0025	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:29	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0025	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:29	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0049	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:29	MFF
Methylene Chloride	ND	0.012	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:29	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.025	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:29	MFF
Naphthalene	ND	0.0049	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:29	MFF
n-Propylbenzene	ND	0.0025	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:29	MFF
Styrene	ND	0.0025	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:29	MFF
1,1,1,2-Tetrachloroethane	ND	0.0025	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:29	MFF
1,1,2,2-Tetrachloroethane	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:29	MFF
Tetrachloroethylene	ND	0.0025	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:29	MFF
Tetrahydrofuran	ND	0.012	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:29	MFF
Toluene	ND	0.0025	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:29	MFF
1,2,3-Trichlorobenzene	ND	0.0025	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:29	MFF
1,2,4-Trichlorobenzene	ND	0.0025	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:29	MFF
1,1,1-Trichloroethane	ND	0.0025	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:29	MFF
1,1,2-Trichloroethane	ND	0.0025	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:29	MFF
Trichloroethylene	ND	0.0025	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:29	MFF
Trichlorofluoromethane (Freon 11)	ND	0.012	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:29	MFF
1,2,3-Trichloropropane	ND	0.0025	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:29	MFF
1,2,4-Trimethylbenzene	ND	0.0025	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:29	MFF
1,3,5-Trimethylbenzene	ND	0.0025	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:29	MFF
Vinyl Chloride	ND	0.012	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:29	MFF
m+p Xylene	ND	0.0049	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:29	MFF
o-Xylene	ND	0.0025	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:29	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	102	70-130	3/5/19 11:29
Toluene-d8	100	70-130	3/5/19 11:29
4-Bromofluorobenzene	103	70-130	3/5/19 11:29

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-G6 (0-5)

Sampled: 3/1/2019 09:25

Sample ID: 19C0049-07

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.38	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:42	IMR
Acenaphthylene	ND	0.38	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:42	IMR
Acetophenone	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:42	IMR
Aniline	ND	0.75	mg/Kg dry	2	L-04, V-34	SW-846 8270D	3/4/19	3/6/19 19:42	IMR
Anthracene	ND	0.38	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:42	IMR
Benzo(a)anthracene	0.95	0.38	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:42	IMR
Benzo(a)pyrene	0.98	0.38	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:42	IMR
Benzo(b)fluoranthene	1.2	0.38	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:42	IMR
Benzo(g,h,i)perylene	0.57	0.38	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:42	IMR
Benzo(k)fluoranthene	0.49	0.38	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:42	IMR
Bis(2-chloroethoxy)methane	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:42	IMR
Bis(2-chloroethyl)ether	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:42	IMR
Bis(2-chloroisopropyl)ether	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:42	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:42	IMR
4-Bromophenylphenylether	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:42	IMR
Butylbenzylphthalate	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:42	IMR
4-Chloroaniline	ND	1.5	mg/Kg dry	2	V-34	SW-846 8270D	3/4/19	3/6/19 19:42	IMR
2-Chloronaphthalene	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:42	IMR
2-Chlorophenol	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:42	IMR
Chrysene	0.95	0.38	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:42	IMR
Dibenz(a,h)anthracene	ND	0.38	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:42	IMR
Dibenzofuran	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:42	IMR
Di-n-butylphthalate	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:42	IMR
1,2-Dichlorobenzene	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:42	IMR
1,3-Dichlorobenzene	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:42	IMR
1,4-Dichlorobenzene	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:42	IMR
3,3-Dichlorobenzidine	ND	0.38	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:42	IMR
2,4-Dichlorophenol	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:42	IMR
Diethylphthalate	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:42	IMR
2,4-Dimethylphenol	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:42	IMR
Dimethylphthalate	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:42	IMR
2,4-Dinitrophenol	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:42	IMR
2,4-Dinitrotoluene	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:42	IMR
2,6-Dinitrotoluene	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:42	IMR
Di-n-octylphthalate	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:42	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:42	IMR
Fluoranthene	1.6	0.38	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:42	IMR
Fluorene	ND	0.38	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:42	IMR
Hexachlorobenzene	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:42	IMR
Hexachlorobutadiene	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:42	IMR
Hexachloroethane	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:42	IMR
Indeno(1,2,3-cd)pyrene	0.65	0.38	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:42	IMR
Isophorone	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:42	IMR
2-Methylnaphthalene	ND	0.38	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:42	IMR

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-G6 (0-5)

Sampled: 3/1/2019 09:25

Sample ID: 19C0049-07

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:42	IMR
3/4-Methylphenol	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:42	IMR
Naphthalene	ND	0.38	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:42	IMR
Nitrobenzene	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:42	IMR
2-Nitrophenol	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:42	IMR
4-Nitrophenol	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:42	IMR
Pentachlorophenol	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:42	IMR
Phenanthrene	0.93	0.38	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:42	IMR
Phenol	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:42	IMR
Pyrene	1.9	0.38	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:42	IMR
1,2,4-Trichlorobenzene	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:42	IMR
2,4,5-Trichlorophenol	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:42	IMR
2,4,6-Trichlorophenol	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 19:42	IMR
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2-Fluorophenol		52.4	30-130					3/6/19 19:42	
Phenol-d6		53.1	30-130					3/6/19 19:42	
Nitrobenzene-d5		53.7	30-130					3/6/19 19:42	
2-Fluorobiphenyl		59.1	30-130					3/6/19 19:42	
2,4,6-Tribromophenol		55.7	30-130					3/6/19 19:42	
p-Terphenyl-d14		67.4	30-130					3/6/19 19:42	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-G6 (0-5)

Sampled: 3/1/2019 09:25

Sample ID: 19C0049-07

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.088	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 23:48	JMB
Aroclor-1221 [1]	ND	0.088	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 23:48	JMB
Aroclor-1232 [1]	ND	0.088	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 23:48	JMB
Aroclor-1242 [1]	ND	0.088	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 23:48	JMB
Aroclor-1248 [1]	ND	0.088	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 23:48	JMB
Aroclor-1254 [1]	ND	0.088	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 23:48	JMB
Aroclor-1260 [1]	ND	0.088	mg/Kg dry	4	R-05	SW-846 8082A	3/4/19	3/6/19 23:48	JMB
Aroclor-1262 [1]	ND	0.088	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 23:48	JMB
Aroclor-1268 [1]	ND	0.088	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 23:48	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		92.6	30-150					3/6/19 23:48	
Decachlorobiphenyl [2]		87.9	30-150					3/6/19 23:48	
Tetrachloro-m-xylene [1]		102	30-150					3/6/19 23:48	
Tetrachloro-m-xylene [2]		95.3	30-150					3/6/19 23:48	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-G6 (0-5)

Sampled: 3/1/2019 09:25

Sample ID: 19C0049-07

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	400	180	mg/Kg dry	20		SW-846 8100 Modified	3/4/19	3/7/19 4:07	RMW
Surrogates	% Recovery		Recovery Limits	Flag/Qual					
2-Fluorobiphenyl	*		40-140	S-01		3/7/19 4:07			

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-G6 (0-5)

Sampled: 3/1/2019 09:25

Sample ID: 19C0049-07

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.9	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:54	QNW
Arsenic	5.3	1.9	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:54	QNW
Barium	31	1.9	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:54	QNW
Beryllium	0.35	0.19	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:54	QNW
Cadmium	0.42	0.19	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:54	QNW
Chromium	16	0.37	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:54	QNW
Lead	56	0.56	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:54	QNW
Mercury	0.040	0.027	mg/Kg dry	1		SW-846 7471B	3/4/19	3/6/19 12:37	TBC
Nickel	11	0.37	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:54	QNW
Selenium	ND	3.7	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:54	QNW
Silver	ND	0.37	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:54	QNW
Thallium	ND	1.9	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:54	QNW
Vanadium	21	0.74	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:54	QNW
Zinc	50	0.74	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:54	QNW

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-G6 (0-5)

Sampled: 3/1/2019 09:25

Sample ID: 19C0049-07

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	88.7		% Wt	1		SM 2540G	3/2/19	3/3/19 14:14	VLH
Ignitability	Absent		present/absent	1		SW-846 1030	3/2/19	3/3/19 15:00	KMV
pH @19.7°C	8.0		pH Units	1		SW-846 9045C	3/1/19	3/1/19 21:58	AIA
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	3/2/19	3/5/19 14:15	DJM
Reactive Sulfide	ND	19	mg/Kg	1		SW-846 9030A	3/2/19	3/5/19 13:45	DJM
Specific conductance	7.5	2.0	µmhos/cm	1		SM21-22 2510B Modified	3/7/19	3/7/19 12:00	EC

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-G6 (5-10)

Sampled: 3/1/2019 09:35

Sample ID: 19C0049-08

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.12	mg/Kg dry	1	R-05	SW-846 8260C	3/5/19	3/5/19 11:54	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:54	MFF
Benzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:54	MFF
Bromobenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:54	MFF
Bromochloromethane	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:54	MFF
Bromodichloromethane	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:54	MFF
Bromoform	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:54	MFF
Bromomethane	ND	0.012	mg/Kg dry	1	V-34	SW-846 8260C	3/5/19	3/5/19 11:54	MFF
2-Butanone (MEK)	ND	0.046	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:54	MFF
n-Butylbenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:54	MFF
sec-Butylbenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:54	MFF
tert-Butylbenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:54	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:54	MFF
Carbon Disulfide	ND	0.0069	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:54	MFF
Carbon Tetrachloride	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:54	MFF
Chlorobenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:54	MFF
Chlorodibromomethane	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:54	MFF
Chloroethane	ND	0.012	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:54	MFF
Chloroform	ND	0.0046	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:54	MFF
Chloromethane	ND	0.012	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:54	MFF
2-Chlorotoluene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:54	MFF
4-Chlorotoluene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:54	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:54	MFF
1,2-Dibromoethane (EDB)	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:54	MFF
Dibromomethane	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:54	MFF
1,2-Dichlorobenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:54	MFF
1,3-Dichlorobenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:54	MFF
1,4-Dichlorobenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:54	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.012	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:54	MFF
1,1-Dichloroethane	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:54	MFF
1,2-Dichloroethane	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:54	MFF
1,1-Dichloroethylene	ND	0.0046	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:54	MFF
cis-1,2-Dichloroethylene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:54	MFF
trans-1,2-Dichloroethylene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:54	MFF
1,2-Dichloropropane	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:54	MFF
1,3-Dichloropropane	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:54	MFF
2,2-Dichloropropane	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:54	MFF
1,1-Dichloropropene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:54	MFF
cis-1,3-Dichloropropene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:54	MFF
trans-1,3-Dichloropropene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:54	MFF
Diethyl Ether	ND	0.012	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:54	MFF
Diisopropyl Ether (DIPE)	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:54	MFF
1,4-Dioxane	ND	0.12	mg/Kg dry	1	V-16	SW-846 8260C	3/5/19	3/5/19 11:54	MFF
Ethylbenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:54	MFF



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-G6 (5-10)

Sampled: 3/1/2019 09:35

Sample ID: 19C0049-08

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:54	MFF
2-Hexanone (MBK)	ND	0.023	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:54	MFF
Isopropylbenzene (Cumene)	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:54	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:54	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0046	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:54	MFF
Methylene Chloride	ND	0.012	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:54	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.023	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:54	MFF
Naphthalene	ND	0.0046	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:54	MFF
n-Propylbenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:54	MFF
Styrene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:54	MFF
1,1,1,2-Tetrachloroethane	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:54	MFF
1,1,2,2-Tetrachloroethane	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:54	MFF
Tetrachloroethylene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:54	MFF
Tetrahydrofuran	ND	0.012	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:54	MFF
Toluene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:54	MFF
1,2,3-Trichlorobenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:54	MFF
1,2,4-Trichlorobenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:54	MFF
1,1,1-Trichloroethane	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:54	MFF
1,1,2-Trichloroethane	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:54	MFF
Trichloroethylene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:54	MFF
Trichlorofluoromethane (Freon 11)	ND	0.012	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:54	MFF
1,2,3-Trichloropropane	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:54	MFF
1,2,4-Trimethylbenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:54	MFF
1,3,5-Trimethylbenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:54	MFF
Vinyl Chloride	ND	0.012	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:54	MFF
m+p Xylene	ND	0.0046	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:54	MFF
o-Xylene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:54	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	102	70-130	3/5/19 11:54
Toluene-d8	98.4	70-130	3/5/19 11:54
4-Bromofluorobenzene	99.0	70-130	3/5/19 11:54

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-G6 (5-10)

Sampled: 3/1/2019 09:35

Sample ID: 19C0049-08

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.39	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:10	IMR
Acenaphthylene	ND	0.39	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:10	IMR
Acetophenone	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:10	IMR
Aniline	ND	0.79	mg/Kg dry	2	L-04, V-34	SW-846 8270D	3/4/19	3/6/19 20:10	IMR
Anthracene	ND	0.39	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:10	IMR
Benzo(a)anthracene	0.64	0.39	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:10	IMR
Benzo(a)pyrene	0.73	0.39	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:10	IMR
Benzo(b)fluoranthene	0.86	0.39	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:10	IMR
Benzo(g,h,i)perylene	ND	0.39	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:10	IMR
Benzo(k)fluoranthene	ND	0.39	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:10	IMR
Bis(2-chloroethoxy)methane	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:10	IMR
Bis(2-chloroethyl)ether	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:10	IMR
Bis(2-chloroisopropyl)ether	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:10	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:10	IMR
4-Bromophenylphenylether	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:10	IMR
Butylbenzylphthalate	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:10	IMR
4-Chloroaniline	ND	1.5	mg/Kg dry	2	V-34	SW-846 8270D	3/4/19	3/6/19 20:10	IMR
2-Chloronaphthalene	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:10	IMR
2-Chlorophenol	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:10	IMR
Chrysene	0.72	0.39	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:10	IMR
Dibenz(a,h)anthracene	ND	0.39	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:10	IMR
Dibenzofuran	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:10	IMR
Di-n-butylphthalate	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:10	IMR
1,2-Dichlorobenzene	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:10	IMR
1,3-Dichlorobenzene	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:10	IMR
1,4-Dichlorobenzene	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:10	IMR
3,3-Dichlorobenzidine	ND	0.39	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:10	IMR
2,4-Dichlorophenol	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:10	IMR
Diethylphthalate	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:10	IMR
2,4-Dimethylphenol	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:10	IMR
Dimethylphthalate	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:10	IMR
2,4-Dinitrophenol	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:10	IMR
2,4-Dinitrotoluene	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:10	IMR
2,6-Dinitrotoluene	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:10	IMR
Di-n-octylphthalate	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:10	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:10	IMR
Fluoranthene	1.1	0.39	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:10	IMR
Fluorene	ND	0.39	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:10	IMR
Hexachlorobenzene	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:10	IMR
Hexachlorobutadiene	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:10	IMR
Hexachloroethane	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:10	IMR
Indeno(1,2,3-cd)pyrene	0.47	0.39	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:10	IMR
Isophorone	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:10	IMR
2-Methylnaphthalene	ND	0.39	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:10	IMR

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-G6 (5-10)

Sampled: 3/1/2019 09:35

Sample ID: 19C0049-08

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:10	IMR
3/4-Methylphenol	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:10	IMR
Naphthalene	ND	0.39	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:10	IMR
Nitrobenzene	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:10	IMR
2-Nitrophenol	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:10	IMR
4-Nitrophenol	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:10	IMR
Pentachlorophenol	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:10	IMR
Phenanthrene	0.62	0.39	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:10	IMR
Phenol	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:10	IMR
Pyrene	1.3	0.39	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:10	IMR
1,2,4-Trichlorobenzene	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:10	IMR
2,4,5-Trichlorophenol	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:10	IMR
2,4,6-Trichlorophenol	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:10	IMR
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2-Fluorophenol		40.9	30-130					3/6/19 20:10	
Phenol-d6		41.1	30-130					3/6/19 20:10	
Nitrobenzene-d5		47.5	30-130					3/6/19 20:10	
2-Fluorobiphenyl		52.8	30-130					3/6/19 20:10	
2,4,6-Tribromophenol		44.1	30-130					3/6/19 20:10	
p-Terphenyl-d14		59.7	30-130					3/6/19 20:10	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-G6 (5-10)

Sampled: 3/1/2019 09:35

Sample ID: 19C0049-08

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.094	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 0:06	JMB
Aroclor-1221 [1]	ND	0.094	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 0:06	JMB
Aroclor-1232 [1]	ND	0.094	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 0:06	JMB
Aroclor-1242 [1]	ND	0.094	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 0:06	JMB
Aroclor-1248 [1]	ND	0.094	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 0:06	JMB
Aroclor-1254 [1]	ND	0.094	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 0:06	JMB
Aroclor-1260 [1]	ND	0.094	mg/Kg dry	4	R-05	SW-846 8082A	3/4/19	3/7/19 0:06	JMB
Aroclor-1262 [1]	ND	0.094	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 0:06	JMB
Aroclor-1268 [1]	ND	0.094	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 0:06	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		92.8	30-150					3/7/19 0:06	
Decachlorobiphenyl [2]		86.9	30-150					3/7/19 0:06	
Tetrachloro-m-xylene [1]		104	30-150					3/7/19 0:06	
Tetrachloro-m-xylene [2]		97.1	30-150					3/7/19 0:06	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-G6 (5-10)

Sampled: 3/1/2019 09:35

Sample ID: 19C0049-08

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	430	190	mg/Kg dry	20		SW-846 8100 Modified	3/4/19	3/7/19 0:44	RMW
Surrogates	% Recovery		Recovery Limits	Flag/Qual					
2-Fluorobiphenyl	*		40-140	S-01		3/7/19 0:44			

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-G6 (5-10)

Sampled: 3/1/2019 09:35

Sample ID: 19C0049-08

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.9	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:59	QNW
Arsenic	5.3	1.9	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:59	QNW
Barium	28	1.9	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:59	QNW
Beryllium	0.30	0.19	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:59	QNW
Cadmium	0.50	0.19	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:59	QNW
Chromium	15	0.38	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:59	QNW
Lead	49	0.57	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:59	QNW
Mercury	0.35	0.027	mg/Kg dry	1		SW-846 7471B	3/4/19	3/6/19 12:38	TBC
Nickel	10	0.38	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:59	QNW
Selenium	ND	3.8	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:59	QNW
Silver	ND	0.38	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:59	QNW
Thallium	ND	1.9	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:59	QNW
Vanadium	18	0.76	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:59	QNW
Zinc	57	0.76	mg/Kg dry	1		SW-846 6010D	3/4/19	3/5/19 11:59	QNW

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-G6 (5-10)

Sampled: 3/1/2019 09:35

Sample ID: 19C0049-08

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	85.3		% Wt	1		SM 2540G	3/2/19	3/3/19 14:14	VLH
Ignitability	Absent		present/absent	1		SW-846 1030	3/2/19	3/3/19 15:00	KMV
pH @20°C	7.8		pH Units	1		SW-846 9045C	3/1/19	3/1/19 21:15	AIA
Reactive Cyanide	ND	4.0	mg/Kg	1		SW-846 9014	3/2/19	3/5/19 14:15	DJM
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	3/2/19	3/5/19 13:45	DJM
Specific conductance	15	2.0	µmhos/cm	1		SM21-22 2510B Modified	3/7/19	3/7/19 12:00	EC

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-G7 (0-5)

Sampled: 3/1/2019 10:00

Sample ID: 19C0049-09

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.11	mg/Kg dry	1	R-05	SW-846 8260C	3/5/19	3/5/19 12:18	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.0011	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:18	MFF
Benzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:18	MFF
Bromobenzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:18	MFF
Bromochloromethane	ND	0.0022	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:18	MFF
Bromodichloromethane	ND	0.0022	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:18	MFF
Bromoform	ND	0.0022	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:18	MFF
Bromomethane	ND	0.011	mg/Kg dry	1	V-34	SW-846 8260C	3/5/19	3/5/19 12:18	MFF
2-Butanone (MEK)	ND	0.043	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:18	MFF
n-Butylbenzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:18	MFF
sec-Butylbenzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:18	MFF
tert-Butylbenzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:18	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.0011	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:18	MFF
Carbon Disulfide	ND	0.0065	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:18	MFF
Carbon Tetrachloride	ND	0.0022	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:18	MFF
Chlorobenzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:18	MFF
Chlorodibromomethane	ND	0.0011	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:18	MFF
Chloroethane	ND	0.011	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:18	MFF
Chloroform	ND	0.0043	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:18	MFF
Chloromethane	ND	0.011	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:18	MFF
2-Chlorotoluene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:18	MFF
4-Chlorotoluene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:18	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0022	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:18	MFF
1,2-Dibromoethane (EDB)	ND	0.0011	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:18	MFF
Dibromomethane	ND	0.0022	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:18	MFF
1,2-Dichlorobenzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:18	MFF
1,3-Dichlorobenzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:18	MFF
1,4-Dichlorobenzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:18	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.011	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:18	MFF
1,1-Dichloroethane	ND	0.0022	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:18	MFF
1,2-Dichloroethane	ND	0.0022	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:18	MFF
1,1-Dichloroethylene	ND	0.0043	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:18	MFF
cis-1,2-Dichloroethylene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:18	MFF
trans-1,2-Dichloroethylene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:18	MFF
1,2-Dichloropropane	ND	0.0022	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:18	MFF
1,3-Dichloropropane	ND	0.0011	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:18	MFF
2,2-Dichloropropane	ND	0.0022	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:18	MFF
1,1-Dichloropropene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:18	MFF
cis-1,3-Dichloropropene	ND	0.0011	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:18	MFF
trans-1,3-Dichloropropene	ND	0.0011	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:18	MFF
Diethyl Ether	ND	0.011	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:18	MFF
Diisopropyl Ether (DIPE)	ND	0.0011	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:18	MFF
1,4-Dioxane	ND	0.11	mg/Kg dry	1	V-16	SW-846 8260C	3/5/19	3/5/19 12:18	MFF
Ethylbenzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:18	MFF



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-G7 (0-5)

Sampled: 3/1/2019 10:00

Sample ID: 19C0049-09

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:18	MFF
2-Hexanone (MBK)	ND	0.022	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:18	MFF
Isopropylbenzene (Cumene)	ND	0.0022	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:18	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0022	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:18	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0043	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:18	MFF
Methylene Chloride	ND	0.011	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:18	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.022	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:18	MFF
Naphthalene	ND	0.0043	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:18	MFF
n-Propylbenzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:18	MFF
Styrene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:18	MFF
1,1,1,2-Tetrachloroethane	ND	0.0022	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:18	MFF
1,1,2,2-Tetrachloroethane	ND	0.0011	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:18	MFF
Tetrachloroethylene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:18	MFF
Tetrahydrofuran	ND	0.011	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:18	MFF
Toluene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:18	MFF
1,2,3-Trichlorobenzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:18	MFF
1,2,4-Trichlorobenzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:18	MFF
1,1,1-Trichloroethane	ND	0.0022	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:18	MFF
1,1,2-Trichloroethane	ND	0.0022	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:18	MFF
Trichloroethylene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:18	MFF
Trichlorofluoromethane (Freon 11)	ND	0.011	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:18	MFF
1,2,3-Trichloropropane	ND	0.0022	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:18	MFF
1,2,4-Trimethylbenzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:18	MFF
1,3,5-Trimethylbenzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:18	MFF
Vinyl Chloride	ND	0.011	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:18	MFF
m+p Xylene	ND	0.0043	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:18	MFF
o-Xylene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:18	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	103	70-130	3/5/19 12:18
Toluene-d8	99.0	70-130	3/5/19 12:18
4-Bromofluorobenzene	101	70-130	3/5/19 12:18

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-G7 (0-5)

Sampled: 3/1/2019 10:00

Sample ID: 19C0049-09

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.39	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:37	IMR
Acenaphthylene	ND	0.39	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:37	IMR
Acetophenone	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:37	IMR
Aniline	ND	0.77	mg/Kg dry	2	L-04, V-34	SW-846 8270D	3/4/19	3/6/19 20:37	IMR
Anthracene	ND	0.39	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:37	IMR
Benzo(a)anthracene	0.57	0.39	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:37	IMR
Benzo(a)pyrene	0.58	0.39	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:37	IMR
Benzo(b)fluoranthene	0.71	0.39	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:37	IMR
Benzo(g,h,i)perylene	ND	0.39	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:37	IMR
Benzo(k)fluoranthene	ND	0.39	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:37	IMR
Bis(2-chloroethoxy)methane	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:37	IMR
Bis(2-chloroethyl)ether	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:37	IMR
Bis(2-chloroisopropyl)ether	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:37	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:37	IMR
4-Bromophenylphenylether	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:37	IMR
Butylbenzylphthalate	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:37	IMR
4-Chloroaniline	ND	1.5	mg/Kg dry	2	V-34	SW-846 8270D	3/4/19	3/6/19 20:37	IMR
2-Chloronaphthalene	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:37	IMR
2-Chlorophenol	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:37	IMR
Chrysene	0.60	0.39	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:37	IMR
Dibenz(a,h)anthracene	ND	0.39	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:37	IMR
Dibenzofuran	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:37	IMR
Di-n-butylphthalate	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:37	IMR
1,2-Dichlorobenzene	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:37	IMR
1,3-Dichlorobenzene	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:37	IMR
1,4-Dichlorobenzene	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:37	IMR
3,3-Dichlorobenzidine	ND	0.39	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:37	IMR
2,4-Dichlorophenol	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:37	IMR
Diethylphthalate	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:37	IMR
2,4-Dimethylphenol	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:37	IMR
Dimethylphthalate	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:37	IMR
2,4-Dinitrophenol	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:37	IMR
2,4-Dinitrotoluene	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:37	IMR
2,6-Dinitrotoluene	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:37	IMR
Di-n-octylphthalate	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:37	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:37	IMR
Fluoranthene	0.96	0.39	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:37	IMR
Fluorene	ND	0.39	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:37	IMR
Hexachlorobenzene	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:37	IMR
Hexachlorobutadiene	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:37	IMR
Hexachloroethane	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:37	IMR
Indeno(1,2,3-cd)pyrene	ND	0.39	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:37	IMR
Isophorone	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:37	IMR
2-Methylnaphthalene	ND	0.39	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:37	IMR

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-G7 (0-5)

Sampled: 3/1/2019 10:00

Sample ID: 19C0049-09

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:37	IMR
3/4-Methylphenol	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:37	IMR
Naphthalene	ND	0.39	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:37	IMR
Nitrobenzene	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:37	IMR
2-Nitrophenol	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:37	IMR
4-Nitrophenol	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:37	IMR
Pentachlorophenol	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:37	IMR
Phenanthrene	0.58	0.39	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:37	IMR
Phenol	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:37	IMR
Pyrene	1.2	0.39	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:37	IMR
1,2,4-Trichlorobenzene	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:37	IMR
2,4,5-Trichlorophenol	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:37	IMR
2,4,6-Trichlorophenol	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 20:37	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	50.0	30-130	
Phenol-d6	49.5	30-130	
Nitrobenzene-d5	51.3	30-130	
2-Fluorobiphenyl	54.5	30-130	
2,4,6-Tribromophenol	51.1	30-130	
p-Terphenyl-d14	63.9	30-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-G7 (0-5)

Sampled: 3/1/2019 10:00

Sample ID: 19C0049-09

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.087	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 0:24	JMB
Aroclor-1221 [1]	ND	0.087	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 0:24	JMB
Aroclor-1232 [1]	ND	0.087	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 0:24	JMB
Aroclor-1242 [1]	ND	0.087	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 0:24	JMB
Aroclor-1248 [1]	ND	0.087	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 0:24	JMB
Aroclor-1254 [1]	ND	0.087	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 0:24	JMB
Aroclor-1260 [1]	ND	0.087	mg/Kg dry	4	R-05	SW-846 8082A	3/4/19	3/7/19 0:24	JMB
Aroclor-1262 [1]	ND	0.087	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 0:24	JMB
Aroclor-1268 [1]	ND	0.087	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 0:24	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		93.0	30-150					3/7/19 0:24	
Decachlorobiphenyl [2]		86.8	30-150					3/7/19 0:24	
Tetrachloro-m-xylene [1]		104	30-150					3/7/19 0:24	
Tetrachloro-m-xylene [2]		97.2	30-150					3/7/19 0:24	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-G7 (0-5)

Sampled: 3/1/2019 10:00

Sample ID: 19C0049-09

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	360	190	mg/Kg dry	20		SW-846 8100 Modified	3/4/19	3/7/19 1:04	RMW
Surrogates	% Recovery		Recovery Limits	Flag/Qual					
2-Fluorobiphenyl	*		40-140	S-01		3/7/19 1:04			

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-G7 (0-5)

Sampled: 3/1/2019 10:00

Sample ID: 19C0049-09

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.9	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 11:34	QNW
Arsenic	5.0	1.9	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 11:34	QNW
Barium	37	1.9	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 11:34	QNW
Beryllium	0.39	0.19	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 11:34	QNW
Cadmium	0.36	0.19	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 11:34	QNW
Chromium	16	0.38	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 11:34	QNW
Lead	53	0.56	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 11:34	QNW
Mercury	0.043	0.028	mg/Kg dry	1		SW-846 7471B	3/4/19	3/6/19 12:40	TBC
Nickel	13	0.38	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 11:34	QNW
Selenium	ND	3.8	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 11:34	QNW
Silver	ND	0.38	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 11:34	QNW
Thallium	ND	1.9	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 11:34	QNW
Vanadium	25	0.75	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 11:34	QNW
Zinc	51	0.75	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 11:34	QNW

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-G7 (0-5)

Sampled: 3/1/2019 10:00

Sample ID: 19C0049-09

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	87.3		% Wt	1		SM 2540G	3/2/19	3/3/19 14:14	VLH
Ignitability	Absent		present/absent	1		SW-846 1030	3/2/19	3/3/19 15:00	KMV
pH @19.3°C	8.0		pH Units	1		SW-846 9045C	3/1/19	3/1/19 21:15	AIA
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	3/2/19	3/5/19 14:15	DJM
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	3/2/19	3/5/19 13:45	DJM
Specific conductance	13	2.0	µmhos/cm	1		SM21-22 2510B Modified	3/7/19	3/7/19 12:00	EC

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-G7 (5-10)

Sampled: 3/1/2019 10:05

Sample ID: 19C0049-10

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.099	mg/Kg dry	1	R-05	SW-846 8260C	3/5/19	3/5/19 12:43	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00099	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:43	MFF
Benzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:43	MFF
Bromobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:43	MFF
Bromochloromethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:43	MFF
Bromodichloromethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:43	MFF
Bromoform	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:43	MFF
Bromomethane	ND	0.0099	mg/Kg dry	1	V-34	SW-846 8260C	3/5/19	3/5/19 12:43	MFF
2-Butanone (MEK)	ND	0.040	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:43	MFF
n-Butylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:43	MFF
sec-Butylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:43	MFF
tert-Butylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:43	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00099	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:43	MFF
Carbon Disulfide	ND	0.0059	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:43	MFF
Carbon Tetrachloride	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:43	MFF
Chlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:43	MFF
Chlorodibromomethane	ND	0.00099	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:43	MFF
Chloroethane	ND	0.0099	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:43	MFF
Chloroform	ND	0.0040	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:43	MFF
Chloromethane	ND	0.0099	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:43	MFF
2-Chlorotoluene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:43	MFF
4-Chlorotoluene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:43	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:43	MFF
1,2-Dibromoethane (EDB)	ND	0.00099	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:43	MFF
Dibromomethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:43	MFF
1,2-Dichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:43	MFF
1,3-Dichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:43	MFF
1,4-Dichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:43	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0099	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:43	MFF
1,1-Dichloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:43	MFF
1,2-Dichloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:43	MFF
1,1-Dichloroethylene	ND	0.0040	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:43	MFF
cis-1,2-Dichloroethylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:43	MFF
trans-1,2-Dichloroethylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:43	MFF
1,2-Dichloropropane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:43	MFF
1,3-Dichloropropane	ND	0.00099	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:43	MFF
2,2-Dichloropropane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:43	MFF
1,1-Dichloropropene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:43	MFF
cis-1,3-Dichloropropene	ND	0.00099	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:43	MFF
trans-1,3-Dichloropropene	ND	0.00099	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:43	MFF
Diethyl Ether	ND	0.0099	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:43	MFF
Diisopropyl Ether (DIPE)	ND	0.00099	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:43	MFF
1,4-Dioxane	ND	0.099	mg/Kg dry	1	V-16	SW-846 8260C	3/5/19	3/5/19 12:43	MFF
Ethylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:43	MFF



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-G7 (5-10)

Sampled: 3/1/2019 10:05

Sample ID: 19C0049-10

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:43	MFF
2-Hexanone (MBK)	ND	0.020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:43	MFF
Isopropylbenzene (Cumene)	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:43	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:43	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0040	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:43	MFF
Methylene Chloride	ND	0.0099	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:43	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:43	MFF
Naphthalene	ND	0.0040	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:43	MFF
n-Propylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:43	MFF
Styrene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:43	MFF
1,1,1,2-Tetrachloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:43	MFF
1,1,2,2-Tetrachloroethane	ND	0.00099	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:43	MFF
Tetrachloroethylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:43	MFF
Tetrahydrofuran	ND	0.0099	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:43	MFF
Toluene	0.0026	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:43	MFF
1,2,3-Trichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:43	MFF
1,2,4-Trichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:43	MFF
1,1,1-Trichloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:43	MFF
1,1,2-Trichloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:43	MFF
Trichloroethylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:43	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0099	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:43	MFF
1,2,3-Trichloropropane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:43	MFF
1,2,4-Trimethylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:43	MFF
1,3,5-Trimethylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:43	MFF
Vinyl Chloride	ND	0.0099	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:43	MFF
m+p Xylene	ND	0.0040	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:43	MFF
o-Xylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:43	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	104	70-130	
Toluene-d8	98.6	70-130	
4-Bromofluorobenzene	99.8	70-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-G7 (5-10)

Sampled: 3/1/2019 10:05

Sample ID: 19C0049-10

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatle Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.38	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:05	IMR
Acenaphthylene	ND	0.38	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:05	IMR
Acetophenone	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:05	IMR
Aniline	ND	0.77	mg/Kg dry	2	L-04, V-34	SW-846 8270D	3/4/19	3/6/19 21:05	IMR
Anthracene	ND	0.38	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:05	IMR
Benzo(a)anthracene	0.57	0.38	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:05	IMR
Benzo(a)pyrene	0.58	0.38	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:05	IMR
Benzo(b)fluoranthene	0.68	0.38	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:05	IMR
Benzo(g,h,i)perylene	ND	0.38	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:05	IMR
Benzo(k)fluoranthene	ND	0.38	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:05	IMR
Bis(2-chloroethoxy)methane	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:05	IMR
Bis(2-chloroethyl)ether	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:05	IMR
Bis(2-chloroisopropyl)ether	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:05	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:05	IMR
4-Bromophenylphenylether	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:05	IMR
Butylbenzylphthalate	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:05	IMR
4-Chloroaniline	ND	1.5	mg/Kg dry	2	V-34	SW-846 8270D	3/4/19	3/6/19 21:05	IMR
2-Chloronaphthalene	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:05	IMR
2-Chlorophenol	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:05	IMR
Chrysene	0.58	0.38	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:05	IMR
Dibenz(a,h)anthracene	ND	0.38	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:05	IMR
Dibenzofuran	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:05	IMR
Di-n-butylphthalate	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:05	IMR
1,2-Dichlorobenzene	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:05	IMR
1,3-Dichlorobenzene	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:05	IMR
1,4-Dichlorobenzene	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:05	IMR
3,3-Dichlorobenzidine	ND	0.38	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:05	IMR
2,4-Dichlorophenol	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:05	IMR
Diethylphthalate	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:05	IMR
2,4-Dimethylphenol	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:05	IMR
Dimethylphthalate	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:05	IMR
2,4-Dinitrophenol	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:05	IMR
2,4-Dinitrotoluene	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:05	IMR
2,6-Dinitrotoluene	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:05	IMR
Di-n-octylphthalate	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:05	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:05	IMR
Fluoranthene	1.1	0.38	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:05	IMR
Fluorene	ND	0.38	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:05	IMR
Hexachlorobenzene	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:05	IMR
Hexachlorobutadiene	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:05	IMR
Hexachloroethane	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:05	IMR
Indeno(1,2,3-cd)pyrene	ND	0.38	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:05	IMR
Isophorone	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:05	IMR
2-Methylnaphthalene	ND	0.38	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:05	IMR

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-G7 (5-10)

Sampled: 3/1/2019 10:05

Sample ID: 19C0049-10

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:05	IMR
3/4-Methylphenol	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:05	IMR
Naphthalene	ND	0.38	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:05	IMR
Nitrobenzene	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:05	IMR
2-Nitrophenol	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:05	IMR
4-Nitrophenol	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:05	IMR
Pentachlorophenol	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:05	IMR
Phenanthrene	0.82	0.38	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:05	IMR
Phenol	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:05	IMR
Pyrene	1.2	0.38	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:05	IMR
1,2,4-Trichlorobenzene	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:05	IMR
2,4,5-Trichlorophenol	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:05	IMR
2,4,6-Trichlorophenol	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:05	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	60.5	30-130	
Phenol-d6	61.5	30-130	
Nitrobenzene-d5	62.6	30-130	
2-Fluorobiphenyl	68.2	30-130	
2,4,6-Tribromophenol	64.4	30-130	
p-Terphenyl-d14	76.8	30-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-G7 (5-10)

Sampled: 3/1/2019 10:05

Sample ID: 19C0049-10

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 0:41	JMB
Aroclor-1221 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 0:41	JMB
Aroclor-1232 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 0:41	JMB
Aroclor-1242 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 0:41	JMB
Aroclor-1248 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 0:41	JMB
Aroclor-1254 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 0:41	JMB
Aroclor-1260 [1]	ND	0.089	mg/Kg dry	4	R-05	SW-846 8082A	3/4/19	3/7/19 0:41	JMB
Aroclor-1262 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 0:41	JMB
Aroclor-1268 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 0:41	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		89.1	30-150					3/7/19 0:41	
Decachlorobiphenyl [2]		80.6	30-150					3/7/19 0:41	
Tetrachloro-m-xylene [1]		98.7	30-150					3/7/19 0:41	
Tetrachloro-m-xylene [2]		94.3	30-150					3/7/19 0:41	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-G7 (5-10)

Sampled: 3/1/2019 10:05

Sample ID: 19C0049-10

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	430	190	mg/Kg dry	20		SW-846 8100 Modified	3/4/19	3/7/19 1:25	RMW
Surrogates	% Recovery		Recovery Limits	Flag/Qual					
2-Fluorobiphenyl	*		40-140	S-01		3/7/19 1:25			

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-G7 (5-10)

Sampled: 3/1/2019 10:05

Sample ID: 19C0049-10

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.9	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 11:38	QNW
Arsenic	11	1.9	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 11:38	QNW
Barium	38	1.9	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 11:38	QNW
Beryllium	0.40	0.19	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 11:38	QNW
Cadmium	0.56	0.19	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 11:38	QNW
Chromium	15	0.38	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 11:38	QNW
Lead	50	0.56	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 11:38	QNW
Mercury	0.031	0.028	mg/Kg dry	1		SW-846 7471B	3/4/19	3/6/19 12:42	TBC
Nickel	12	0.38	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 11:38	QNW
Selenium	ND	3.8	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 11:38	QNW
Silver	ND	0.38	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 11:38	QNW
Thallium	ND	1.9	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 11:38	QNW
Vanadium	24	0.75	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 11:38	QNW
Zinc	46	0.75	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 11:38	QNW

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-G7 (5-10)

Sampled: 3/1/2019 10:05

Sample ID: 19C0049-10

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	88.5		% Wt	1		SM 2540G	3/2/19	3/3/19 14:14	VLH
Ignitability	Absent		present/absent	1		SW-846 1030	3/5/19	3/5/19 17:00	DJM
pH @19.5°C	7.7		pH Units	1		SW-846 9045C	3/1/19	3/1/19 21:58	AIA
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	3/2/19	3/5/19 14:15	DJM
Reactive Sulfide	ND	19	mg/Kg	1		SW-846 9030A	3/2/19	3/5/19 13:45	DJM
Specific conductance	11	2.0	µmhos/cm	1		SM21-22 2510B Modified	3/7/19	3/7/19 12:00	EC

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-F7 (0-5)

Sampled: 3/1/2019 10:25

Sample ID: 19C0049-11

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.11	mg/Kg dry	1	R-05	SW-846 8260C	3/5/19	3/5/19 13:06	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.0011	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:06	MFF
Benzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:06	MFF
Bromobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:06	MFF
Bromochloromethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:06	MFF
Bromodichloromethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:06	MFF
Bromoform	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:06	MFF
Bromomethane	ND	0.011	mg/Kg dry	1	V-34	SW-846 8260C	3/5/19	3/5/19 13:06	MFF
2-Butanone (MEK)	ND	0.042	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:06	MFF
n-Butylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:06	MFF
sec-Butylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:06	MFF
tert-Butylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:06	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.0011	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:06	MFF
Carbon Disulfide	ND	0.0063	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:06	MFF
Carbon Tetrachloride	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:06	MFF
Chlorobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:06	MFF
Chlorodibromomethane	ND	0.0011	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:06	MFF
Chloroethane	ND	0.011	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:06	MFF
Chloroform	ND	0.0042	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:06	MFF
Chloromethane	ND	0.011	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:06	MFF
2-Chlorotoluene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:06	MFF
4-Chlorotoluene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:06	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:06	MFF
1,2-Dibromoethane (EDB)	ND	0.0011	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:06	MFF
Dibromomethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:06	MFF
1,2-Dichlorobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:06	MFF
1,3-Dichlorobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:06	MFF
1,4-Dichlorobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:06	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.011	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:06	MFF
1,1-Dichloroethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:06	MFF
1,2-Dichloroethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:06	MFF
1,1-Dichloroethylene	ND	0.0042	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:06	MFF
cis-1,2-Dichloroethylene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:06	MFF
trans-1,2-Dichloroethylene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:06	MFF
1,2-Dichloropropane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:06	MFF
1,3-Dichloropropane	ND	0.0011	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:06	MFF
2,2-Dichloropropane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:06	MFF
1,1-Dichloropropene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:06	MFF
cis-1,3-Dichloropropene	ND	0.0011	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:06	MFF
trans-1,3-Dichloropropene	ND	0.0011	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:06	MFF
Diethyl Ether	ND	0.011	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:06	MFF
Diisopropyl Ether (DIPE)	ND	0.0011	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:06	MFF
1,4-Dioxane	ND	0.11	mg/Kg dry	1	V-16	SW-846 8260C	3/5/19	3/5/19 13:06	MFF
Ethylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:06	MFF



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-F7 (0-5)

Sampled: 3/1/2019 10:25

Sample ID: 19C0049-11

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:06	MFF
2-Hexanone (MBK)	ND	0.021	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:06	MFF
Isopropylbenzene (Cumene)	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:06	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:06	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0042	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:06	MFF
Methylene Chloride	ND	0.011	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:06	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.021	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:06	MFF
Naphthalene	ND	0.0042	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:06	MFF
n-Propylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:06	MFF
Styrene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:06	MFF
1,1,1,2-Tetrachloroethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:06	MFF
1,1,1,2,2-Tetrachloroethane	ND	0.0011	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:06	MFF
Tetrachloroethylene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:06	MFF
Tetrahydrofuran	ND	0.011	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:06	MFF
Toluene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:06	MFF
1,2,3-Trichlorobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:06	MFF
1,2,4-Trichlorobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:06	MFF
1,1,1-Trichloroethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:06	MFF
1,1,2-Trichloroethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:06	MFF
Trichloroethylene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:06	MFF
Trichlorofluoromethane (Freon 11)	ND	0.011	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:06	MFF
1,2,3-Trichloropropane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:06	MFF
1,2,4-Trimethylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:06	MFF
1,3,5-Trimethylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:06	MFF
Vinyl Chloride	ND	0.011	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:06	MFF
m+p Xylene	ND	0.0042	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:06	MFF
o-Xylene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:06	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	100	70-130	3/5/19 13:06
Toluene-d8	99.6	70-130	3/5/19 13:06
4-Bromofluorobenzene	101	70-130	3/5/19 13:06

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-F7 (0-5)

Sampled: 3/1/2019 10:25

Sample ID: 19C0049-11

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.37	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:32	IMR
Acenaphthylene	ND	0.37	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:32	IMR
Acetophenone	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:32	IMR
Aniline	ND	0.75	mg/Kg dry	2	L-04, V-34	SW-846 8270D	3/4/19	3/6/19 21:32	IMR
Anthracene	ND	0.37	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:32	IMR
Benzo(a)anthracene	0.81	0.37	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:32	IMR
Benzo(a)pyrene	0.90	0.37	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:32	IMR
Benzo(b)fluoranthene	1.1	0.37	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:32	IMR
Benzo(g,h,i)perylene	0.45	0.37	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:32	IMR
Benzo(k)fluoranthene	0.46	0.37	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:32	IMR
Bis(2-chloroethoxy)methane	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:32	IMR
Bis(2-chloroethyl)ether	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:32	IMR
Bis(2-chloroisopropyl)ether	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:32	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:32	IMR
4-Bromophenylphenylether	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:32	IMR
Butylbenzylphthalate	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:32	IMR
4-Chloroaniline	ND	1.4	mg/Kg dry	2	V-34	SW-846 8270D	3/4/19	3/6/19 21:32	IMR
2-Chloronaphthalene	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:32	IMR
2-Chlorophenol	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:32	IMR
Chrysene	0.92	0.37	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:32	IMR
Dibenz(a,h)anthracene	ND	0.37	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:32	IMR
Dibenzofuran	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:32	IMR
Di-n-butylphthalate	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:32	IMR
1,2-Dichlorobenzene	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:32	IMR
1,3-Dichlorobenzene	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:32	IMR
1,4-Dichlorobenzene	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:32	IMR
3,3-Dichlorobenzidine	ND	0.37	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:32	IMR
2,4-Dichlorophenol	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:32	IMR
Diethylphthalate	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:32	IMR
2,4-Dimethylphenol	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:32	IMR
Dimethylphthalate	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:32	IMR
2,4-Dinitrophenol	ND	1.4	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:32	IMR
2,4-Dinitrotoluene	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:32	IMR
2,6-Dinitrotoluene	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:32	IMR
Di-n-octylphthalate	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:32	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:32	IMR
Fluoranthene	1.5	0.37	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:32	IMR
Fluorene	ND	0.37	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:32	IMR
Hexachlorobenzene	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:32	IMR
Hexachlorobutadiene	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:32	IMR
Hexachloroethane	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:32	IMR
Indeno(1,2,3-cd)pyrene	0.54	0.37	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:32	IMR
Isophorone	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:32	IMR
2-Methylnaphthalene	ND	0.37	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:32	IMR

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-F7 (0-5)

Sampled: 3/1/2019 10:25

Sample ID: 19C0049-11

Sample Matrix: Soil

Sample Flags: RL-08

**Semivolatile Organic Compounds by GC/MS**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:32	IMR
3/4-Methylphenol	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:32	IMR
Naphthalene	ND	0.37	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:32	IMR
Nitrobenzene	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:32	IMR
2-Nitrophenol	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:32	IMR
4-Nitrophenol	ND	1.4	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:32	IMR
Pentachlorophenol	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:32	IMR
Phenanthrene	0.97	0.37	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:32	IMR
Phenol	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:32	IMR
Pyrene	1.7	0.37	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:32	IMR
1,2,4-Trichlorobenzene	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:32	IMR
2,4,5-Trichlorophenol	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:32	IMR
2,4,6-Trichlorophenol	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 21:32	IMR
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2-Fluorophenol		66.4	30-130					3/6/19 21:32	
Phenol-d6		68.1	30-130					3/6/19 21:32	
Nitrobenzene-d5		70.3	30-130					3/6/19 21:32	
2-Fluorobiphenyl		74.5	30-130					3/6/19 21:32	
2,4,6-Tribromophenol		69.5	30-130					3/6/19 21:32	
p-Terphenyl-d14		79.3	30-130					3/6/19 21:32	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-F7 (0-5)

Sampled: 3/1/2019 10:25

Sample ID: 19C0049-11

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 1:46	JMB
Aroclor-1221 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 1:46	JMB
Aroclor-1232 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 1:46	JMB
Aroclor-1242 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 1:46	JMB
Aroclor-1248 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 1:46	JMB
Aroclor-1254 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 1:46	JMB
Aroclor-1260 [1]	ND	0.084	mg/Kg dry	4	R-05	SW-846 8082A	3/4/19	3/7/19 1:46	JMB
Aroclor-1262 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 1:46	JMB
Aroclor-1268 [1]	ND	0.084	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 1:46	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		92.1	30-150					3/7/19 1:46	
Decachlorobiphenyl [2]		87.2	30-150					3/7/19 1:46	
Tetrachloro-m-xylene [1]		100	30-150					3/7/19 1:46	
Tetrachloro-m-xylene [2]		95.5	30-150					3/7/19 1:46	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-F7 (0-5)

Sampled: 3/1/2019 10:25

Sample ID: 19C0049-11

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	580	180	mg/Kg dry	20		SW-846 8100 Modified	3/4/19	3/7/19 13:44	KLB
Surrogates	% Recovery		Recovery Limits	Flag/Qual					
2-Fluorobiphenyl	*		40-140	S-01		3/7/19 13:44			

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-F7 (0-5)

Sampled: 3/1/2019 10:25

Sample ID: 19C0049-11

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.8	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:02	QNW
Arsenic	6.7	1.8	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:02	QNW
Barium	30	1.8	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:02	QNW
Beryllium	0.35	0.18	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:02	QNW
Cadmium	0.51	0.18	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:02	QNW
Chromium	15	0.36	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:02	QNW
Lead	57	0.54	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:02	QNW
Mercury	0.038	0.027	mg/Kg dry	1		SW-846 7471B	3/4/19	3/6/19 12:47	TBC
Nickel	12	0.36	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:02	QNW
Selenium	ND	3.6	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:02	QNW
Silver	ND	0.36	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:02	QNW
Thallium	ND	1.8	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:02	QNW
Vanadium	21	0.72	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:02	QNW
Zinc	46	0.72	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:02	QNW

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-F7 (0-5)

Sampled: 3/1/2019 10:25

Sample ID: 19C0049-11

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	90.2		% Wt	1		SM 2540G	3/2/19	3/3/19 14:14	VLH
Ignitability	Absent		present/absent	1		SW-846 1030	3/5/19	3/5/19 17:00	DJM
pH @18.8°C	7.7		pH Units	1		SW-846 9045C	3/1/19	3/1/19 21:15	AIA
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	3/2/19	3/5/19 14:15	DJM
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	3/2/19	3/5/19 13:45	DJM
Specific conductance	15	2.0	µmhos/cm	1		SM21-22 2510B Modified	3/7/19	3/7/19 12:00	EC

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-F7 (5-10)

Sampled: 3/1/2019 11:15

Sample ID: 19C0049-12

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.082	mg/Kg dry	1	R-05	SW-846 8260C	3/5/19	3/5/19 13:29	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00082	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:29	MFF
Benzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:29	MFF
Bromobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:29	MFF
Bromochloromethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:29	MFF
Bromodichloromethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:29	MFF
Bromoform	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:29	MFF
Bromomethane	ND	0.0082	mg/Kg dry	1	V-34	SW-846 8260C	3/5/19	3/5/19 13:29	MFF
2-Butanone (MEK)	ND	0.033	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:29	MFF
n-Butylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:29	MFF
sec-Butylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:29	MFF
tert-Butylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:29	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00082	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:29	MFF
Carbon Disulfide	ND	0.0049	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:29	MFF
Carbon Tetrachloride	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:29	MFF
Chlorobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:29	MFF
Chlorodibromomethane	ND	0.00082	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:29	MFF
Chloroethane	ND	0.0082	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:29	MFF
Chloroform	ND	0.0033	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:29	MFF
Chloromethane	ND	0.0082	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:29	MFF
2-Chlorotoluene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:29	MFF
4-Chlorotoluene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:29	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:29	MFF
1,2-Dibromoethane (EDB)	ND	0.00082	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:29	MFF
Dibromomethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:29	MFF
1,2-Dichlorobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:29	MFF
1,3-Dichlorobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:29	MFF
1,4-Dichlorobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:29	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0082	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:29	MFF
1,1-Dichloroethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:29	MFF
1,2-Dichloroethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:29	MFF
1,1-Dichloroethylene	ND	0.0033	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:29	MFF
cis-1,2-Dichloroethylene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:29	MFF
trans-1,2-Dichloroethylene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:29	MFF
1,2-Dichloropropane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:29	MFF
1,3-Dichloropropane	ND	0.00082	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:29	MFF
2,2-Dichloropropane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:29	MFF
1,1-Dichloropropene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:29	MFF
cis-1,3-Dichloropropene	ND	0.00082	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:29	MFF
trans-1,3-Dichloropropene	ND	0.00082	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:29	MFF
Diethyl Ether	ND	0.0082	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:29	MFF
Diisopropyl Ether (DIPE)	ND	0.00082	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:29	MFF
1,4-Dioxane	ND	0.082	mg/Kg dry	1	V-16	SW-846 8260C	3/5/19	3/5/19 13:29	MFF
Ethylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:29	MFF



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-F7 (5-10)

Sampled: 3/1/2019 11:15

Sample ID: 19C0049-12

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:29	MFF
2-Hexanone (MBK)	ND	0.016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:29	MFF
Isopropylbenzene (Cumene)	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:29	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:29	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0033	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:29	MFF
Methylene Chloride	ND	0.0082	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:29	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:29	MFF
Naphthalene	ND	0.0033	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:29	MFF
n-Propylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:29	MFF
Styrene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:29	MFF
1,1,1,2-Tetrachloroethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:29	MFF
1,1,1,2,2-Tetrachloroethane	ND	0.00082	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:29	MFF
Tetrachloroethylene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:29	MFF
Tetrahydrofuran	ND	0.0082	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:29	MFF
Toluene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:29	MFF
1,2,3-Trichlorobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:29	MFF
1,2,4-Trichlorobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:29	MFF
1,1,1-Trichloroethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:29	MFF
1,1,2-Trichloroethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:29	MFF
Trichloroethylene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:29	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0082	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:29	MFF
1,2,3-Trichloropropane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:29	MFF
1,2,4-Trimethylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:29	MFF
1,3,5-Trimethylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:29	MFF
Vinyl Chloride	ND	0.0082	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:29	MFF
m+p Xylene	ND	0.0033	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:29	MFF
o-Xylene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:29	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	101	70-130	3/5/19 13:29
Toluene-d8	98.5	70-130	3/5/19 13:29
4-Bromofluorobenzene	102	70-130	3/5/19 13:29

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-F7 (5-10)

Sampled: 3/1/2019 11:15

Sample ID: 19C0049-12

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatle Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.97	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 21:59	IMR
Acenaphthylene	ND	0.97	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 21:59	IMR
Acetophenone	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 21:59	IMR
Aniline	ND	1.9	mg/Kg dry	5	L-04, V-34	SW-846 8270D	3/4/19	3/6/19 21:59	IMR
Anthracene	ND	0.97	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 21:59	IMR
Benzo(a)anthracene	ND	0.97	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 21:59	IMR
Benzo(a)pyrene	ND	0.97	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 21:59	IMR
Benzo(b)fluoranthene	ND	0.97	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 21:59	IMR
Benzo(g,h,i)perylene	ND	0.97	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 21:59	IMR
Benzo(k)fluoranthene	ND	0.97	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 21:59	IMR
Bis(2-chloroethoxy)methane	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 21:59	IMR
Bis(2-chloroethyl)ether	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 21:59	IMR
Bis(2-chloroisopropyl)ether	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 21:59	IMR
Bis(2-Ethylhexyl)phthalate	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 21:59	IMR
4-Bromophenylphenylether	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 21:59	IMR
Butylbenzylphthalate	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 21:59	IMR
4-Chloroaniline	ND	3.8	mg/Kg dry	5	V-34	SW-846 8270D	3/4/19	3/6/19 21:59	IMR
2-Chloronaphthalene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 21:59	IMR
2-Chlorophenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 21:59	IMR
Chrysene	ND	0.97	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 21:59	IMR
Dibenz(a,h)anthracene	ND	0.97	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 21:59	IMR
Dibenzofuran	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 21:59	IMR
Di-n-butylphthalate	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 21:59	IMR
1,2-Dichlorobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 21:59	IMR
1,3-Dichlorobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 21:59	IMR
1,4-Dichlorobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 21:59	IMR
3,3-Dichlorobenzidine	ND	0.97	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 21:59	IMR
2,4-Dichlorophenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 21:59	IMR
Diethylphthalate	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 21:59	IMR
2,4-Dimethylphenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 21:59	IMR
Dimethylphthalate	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 21:59	IMR
2,4-Dinitrophenol	ND	3.8	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 21:59	IMR
2,4-Dinitrotoluene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 21:59	IMR
2,6-Dinitrotoluene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 21:59	IMR
Di-n-octylphthalate	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 21:59	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 21:59	IMR
Fluoranthene	ND	0.97	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 21:59	IMR
Fluorene	ND	0.97	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 21:59	IMR
Hexachlorobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 21:59	IMR
Hexachlorobutadiene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 21:59	IMR
Hexachloroethane	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 21:59	IMR
Indeno(1,2,3-cd)pyrene	ND	0.97	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 21:59	IMR
Isophorone	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 21:59	IMR
2-Methylnaphthalene	ND	0.97	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 21:59	IMR

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-F7 (5-10)

Sampled: 3/1/2019 11:15

Sample ID: 19C0049-12

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 21:59	IMR
3/4-Methylphenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 21:59	IMR
Naphthalene	ND	0.97	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 21:59	IMR
Nitrobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 21:59	IMR
2-Nitrophenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 21:59	IMR
4-Nitrophenol	ND	3.8	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 21:59	IMR
Pentachlorophenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 21:59	IMR
Phenanthrene	ND	0.97	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 21:59	IMR
Phenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 21:59	IMR
Pyrene	ND	0.97	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 21:59	IMR
1,2,4-Trichlorobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 21:59	IMR
2,4,5-Trichlorophenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 21:59	IMR
2,4,6-Trichlorophenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 21:59	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	57.9	30-130	
Phenol-d6	64.6	30-130	
Nitrobenzene-d5	72.6	30-130	
2-Fluorobiphenyl	78.4	30-130	
2,4,6-Tribromophenol	56.3	30-130	
p-Terphenyl-d14	83.7	30-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-F7 (5-10)

Sampled: 3/1/2019 11:15

Sample ID: 19C0049-12

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 2:04	JMB
Aroclor-1221 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 2:04	JMB
Aroclor-1232 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 2:04	JMB
Aroclor-1242 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 2:04	JMB
Aroclor-1248 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 2:04	JMB
Aroclor-1254 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 2:04	JMB
Aroclor-1260 [1]	ND	0.089	mg/Kg dry	4	R-05	SW-846 8082A	3/4/19	3/7/19 2:04	JMB
Aroclor-1262 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 2:04	JMB
Aroclor-1268 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 2:04	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		98.2	30-150					3/7/19 2:04	
Decachlorobiphenyl [2]		90.4	30-150					3/7/19 2:04	
Tetrachloro-m-xylene [1]		105	30-150					3/7/19 2:04	
Tetrachloro-m-xylene [2]		96.8	30-150					3/7/19 2:04	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-F7 (5-10)

Sampled: 3/1/2019 11:15

Sample ID: 19C0049-12

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	560	190	mg/Kg dry	20		SW-846 8100 Modified	3/4/19	3/7/19 14:04	KLB
<b>Surrogates</b>		<b>% Recovery</b>	<b>Recovery Limits</b>		<b>Flag/Qual</b>				
2-Fluorobiphenyl		*	40-140		S-01			3/7/19 14:04	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-F7 (5-10)

Sampled: 3/1/2019 11:15

Sample ID: 19C0049-12

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.9	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:07	QNW
Arsenic	5.9	1.9	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:07	QNW
Barium	30	1.9	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:07	QNW
Beryllium	0.35	0.19	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:07	QNW
Cadmium	0.41	0.19	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:07	QNW
Chromium	15	0.37	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:07	QNW
Lead	34	0.56	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:07	QNW
Mercury	0.032	0.028	mg/Kg dry	1		SW-846 7471B	3/4/19	3/6/19 12:49	TBC
Nickel	12	0.37	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:07	QNW
Selenium	ND	3.7	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:07	QNW
Silver	ND	0.37	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:07	QNW
Thallium	ND	1.9	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:07	QNW
Vanadium	23	0.75	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:07	QNW
Zinc	41	0.75	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:07	QNW

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-F7 (5-10)

Sampled: 3/1/2019 11:15

Sample ID: 19C0049-12

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	86.9		% Wt	1		SM 2540G	3/2/19	3/3/19 14:14	VLH
Ignitability	Absent		present/absent	1		SW-846 1030	3/5/19	3/5/19 17:00	DJM
pH @19.3°C	7.9		pH Units	1		SW-846 9045C	3/1/19	3/1/19 22:20	AIA
Reactive Cyanide	ND	4.0	mg/Kg	1		SW-846 9014	3/2/19	3/5/19 14:15	DJM
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	3/2/19	3/5/19 13:45	DJM
Specific conductance	11	2.0	µmhos/cm	1		SM21-22 2510B Modified	3/7/19	3/7/19 12:00	EC

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-E7 (0-5)

Sampled: 3/1/2019 12:00

Sample ID: 19C0049-13

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.10	mg/Kg dry	1	R-05	SW-846 8260C	3/5/19	3/5/19 13:54	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.0010	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:54	MFF
Benzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:54	MFF
Bromobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:54	MFF
Bromochloromethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:54	MFF
Bromodichloromethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:54	MFF
Bromoform	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:54	MFF
Bromomethane	ND	0.010	mg/Kg dry	1	V-34	SW-846 8260C	3/5/19	3/5/19 13:54	MFF
2-Butanone (MEK)	ND	0.042	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:54	MFF
n-Butylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:54	MFF
sec-Butylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:54	MFF
tert-Butylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:54	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.0010	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:54	MFF
Carbon Disulfide	ND	0.0063	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:54	MFF
Carbon Tetrachloride	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:54	MFF
Chlorobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:54	MFF
Chlorodibromomethane	ND	0.0010	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:54	MFF
Chloroethane	ND	0.010	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:54	MFF
Chloroform	ND	0.0042	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:54	MFF
Chloromethane	ND	0.010	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:54	MFF
2-Chlorotoluene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:54	MFF
4-Chlorotoluene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:54	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:54	MFF
1,2-Dibromoethane (EDB)	ND	0.0010	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:54	MFF
Dibromomethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:54	MFF
1,2-Dichlorobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:54	MFF
1,3-Dichlorobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:54	MFF
1,4-Dichlorobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:54	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.010	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:54	MFF
1,1-Dichloroethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:54	MFF
1,2-Dichloroethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:54	MFF
1,1-Dichloroethylene	ND	0.0042	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:54	MFF
cis-1,2-Dichloroethylene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:54	MFF
trans-1,2-Dichloroethylene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:54	MFF
1,2-Dichloropropane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:54	MFF
1,3-Dichloropropane	ND	0.0010	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:54	MFF
2,2-Dichloropropane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:54	MFF
1,1-Dichloropropene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:54	MFF
cis-1,3-Dichloropropene	ND	0.0010	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:54	MFF
trans-1,3-Dichloropropene	ND	0.0010	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:54	MFF
Diethyl Ether	ND	0.010	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:54	MFF
Diisopropyl Ether (DIPE)	ND	0.0010	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:54	MFF
1,4-Dioxane	ND	0.10	mg/Kg dry	1	V-16	SW-846 8260C	3/5/19	3/5/19 13:54	MFF
Ethylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:54	MFF



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-E7 (0-5)

Sampled: 3/1/2019 12:00

Sample ID: 19C0049-13

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:54	MFF
2-Hexanone (MBK)	ND	0.021	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:54	MFF
Isopropylbenzene (Cumene)	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:54	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:54	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0042	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:54	MFF
Methylene Chloride	ND	0.010	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:54	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.021	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:54	MFF
Naphthalene	ND	0.0042	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:54	MFF
n-Propylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:54	MFF
Styrene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:54	MFF
1,1,1,2-Tetrachloroethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:54	MFF
1,1,1,2,2-Tetrachloroethane	ND	0.0010	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:54	MFF
Tetrachloroethylene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:54	MFF
Tetrahydrofuran	ND	0.010	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:54	MFF
Toluene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:54	MFF
1,2,3-Trichlorobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:54	MFF
1,2,4-Trichlorobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:54	MFF
1,1,1-Trichloroethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:54	MFF
1,1,2-Trichloroethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:54	MFF
Trichloroethylene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:54	MFF
Trichlorofluoromethane (Freon 11)	ND	0.010	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:54	MFF
1,2,3-Trichloropropane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:54	MFF
1,2,4-Trimethylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:54	MFF
1,3,5-Trimethylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:54	MFF
Vinyl Chloride	ND	0.010	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:54	MFF
m+p Xylene	ND	0.0042	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:54	MFF
o-Xylene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 13:54	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	101	70-130	
Toluene-d8	99.1	70-130	
4-Bromofluorobenzene	99.7	70-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-E7 (0-5)

Sampled: 3/1/2019 12:00

Sample ID: 19C0049-13

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatle Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.39	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:26	IMR
Acenaphthylene	ND	0.39	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:26	IMR
Acetophenone	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:26	IMR
Aniline	ND	0.79	mg/Kg dry	2	L-04, V-34	SW-846 8270D	3/4/19	3/6/19 22:26	IMR
Anthracene	ND	0.39	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:26	IMR
Benzo(a)anthracene	0.55	0.39	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:26	IMR
Benzo(a)pyrene	0.60	0.39	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:26	IMR
Benzo(b)fluoranthene	0.84	0.39	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:26	IMR
Benzo(g,h,i)perylene	ND	0.39	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:26	IMR
Benzo(k)fluoranthene	ND	0.39	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:26	IMR
Bis(2-chloroethoxy)methane	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:26	IMR
Bis(2-chloroethyl)ether	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:26	IMR
Bis(2-chloroisopropyl)ether	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:26	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:26	IMR
4-Bromophenylphenylether	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:26	IMR
Butylbenzylphthalate	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:26	IMR
4-Chloroaniline	ND	1.5	mg/Kg dry	2	V-34	SW-846 8270D	3/4/19	3/6/19 22:26	IMR
2-Chloronaphthalene	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:26	IMR
2-Chlorophenol	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:26	IMR
Chrysene	0.64	0.39	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:26	IMR
Dibenz(a,h)anthracene	ND	0.39	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:26	IMR
Dibenzofuran	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:26	IMR
Di-n-butylphthalate	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:26	IMR
1,2-Dichlorobenzene	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:26	IMR
1,3-Dichlorobenzene	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:26	IMR
1,4-Dichlorobenzene	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:26	IMR
3,3-Dichlorobenzidine	ND	0.39	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:26	IMR
2,4-Dichlorophenol	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:26	IMR
Diethylphthalate	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:26	IMR
2,4-Dimethylphenol	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:26	IMR
Dimethylphthalate	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:26	IMR
2,4-Dinitrophenol	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:26	IMR
2,4-Dinitrotoluene	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:26	IMR
2,6-Dinitrotoluene	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:26	IMR
Di-n-octylphthalate	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:26	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:26	IMR
Fluoranthene	0.92	0.39	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:26	IMR
Fluorene	ND	0.39	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:26	IMR
Hexachlorobenzene	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:26	IMR
Hexachlorobutadiene	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:26	IMR
Hexachloroethane	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:26	IMR
Indeno(1,2,3-cd)pyrene	0.41	0.39	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:26	IMR
Isophorone	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:26	IMR
2-Methylnaphthalene	ND	0.39	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:26	IMR

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-E7 (0-5)

Sampled: 3/1/2019 12:00

Sample ID: 19C0049-13

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:26	IMR
3/4-Methylphenol	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:26	IMR
Naphthalene	ND	0.39	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:26	IMR
Nitrobenzene	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:26	IMR
2-Nitrophenol	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:26	IMR
4-Nitrophenol	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:26	IMR
Pentachlorophenol	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:26	IMR
Phenanthrene	ND	0.39	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:26	IMR
Phenol	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:26	IMR
Pyrene	1.2	0.39	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:26	IMR
1,2,4-Trichlorobenzene	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:26	IMR
2,4,5-Trichlorophenol	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:26	IMR
2,4,6-Trichlorophenol	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:26	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	64.4	30-130	
Phenol-d6	65.6	30-130	
Nitrobenzene-d5	70.0	30-130	
2-Fluorobiphenyl	71.2	30-130	
2,4,6-Tribromophenol	67.4	30-130	
p-Terphenyl-d14	85.9	30-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-E7 (0-5)

Sampled: 3/1/2019 12:00

Sample ID: 19C0049-13

Sample Matrix: Soil

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 2:21	JMB
Aroclor-1221 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 2:21	JMB
Aroclor-1232 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 2:21	JMB
Aroclor-1242 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 2:21	JMB
Aroclor-1248 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 2:21	JMB
Aroclor-1254 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 2:21	JMB
Aroclor-1260 [1]	ND	0.090	mg/Kg dry	4	R-05	SW-846 8082A	3/4/19	3/7/19 2:21	JMB
Aroclor-1262 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 2:21	JMB
Aroclor-1268 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 2:21	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		63.7	30-150					3/7/19 2:21	
Decachlorobiphenyl [2]		59.0	30-150					3/7/19 2:21	
Tetrachloro-m-xylene [1]		68.8	30-150					3/7/19 2:21	
Tetrachloro-m-xylene [2]		64.2	30-150					3/7/19 2:21	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-E7 (0-5)

Sampled: 3/1/2019 12:00

Sample ID: 19C0049-13

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	430	190	mg/Kg dry	20		SW-846 8100 Modified	3/4/19	3/7/19 1:45	RMW
Surrogates	% Recovery		Recovery Limits	Flag/Qual					
2-Fluorobiphenyl	*		40-140	S-01		3/7/19 1:45			

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-E7 (0-5)

Sampled: 3/1/2019 12:00

Sample ID: 19C0049-13

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	9.3	1.9	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:12	QNW
Arsenic	8.7	1.9	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:12	QNW
Barium	34	1.9	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:12	QNW
Beryllium	0.37	0.19	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:12	QNW
Cadmium	0.52	0.19	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:12	QNW
Chromium	15	0.39	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:12	QNW
Lead	780	0.58	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:12	QNW
Mercury	0.030	0.027	mg/Kg dry	1		SW-846 7471B	3/4/19	3/6/19 12:51	TBC
Nickel	11	0.39	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:12	QNW
Selenium	ND	3.9	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:12	QNW
Silver	ND	0.39	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:12	QNW
Thallium	ND	1.9	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:12	QNW
Vanadium	20	0.78	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:12	QNW
Zinc	56	0.78	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:12	QNW

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-E7 (0-5)

Sampled: 3/1/2019 12:00

Sample ID: 19C0049-13

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	86.2		% Wt	1		SM 2540G	3/2/19	3/3/19 14:14	VLH
Ignitability	Absent		present/absent	1		SW-846 1030	3/5/19	3/5/19 17:00	DJM
pH @22.6°C	7.2		pH Units	1		SW-846 9045C	3/1/19	3/1/19 21:15	AIA
Reactive Cyanide	ND	4.0	mg/Kg	1		SW-846 9014	3/2/19	3/5/19 14:15	DJM
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	3/2/19	3/5/19 13:45	DJM
Specific conductance	10	2.0	µmhos/cm	1		SM21-22 2510B Modified	3/7/19	3/7/19 12:00	EC

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-E7 (5-10)

Sampled: 3/1/2019 12:05

Sample ID: 19C0049-14

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.098	mg/Kg dry	1	R-05	SW-846 8260C	3/5/19	3/5/19 14:19	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00098	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:19	MFF
Benzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:19	MFF
Bromobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:19	MFF
Bromochloromethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:19	MFF
Bromodichloromethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:19	MFF
Bromoform	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:19	MFF
Bromomethane	ND	0.0098	mg/Kg dry	1	V-34	SW-846 8260C	3/5/19	3/5/19 14:19	MFF
2-Butanone (MEK)	ND	0.039	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:19	MFF
n-Butylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:19	MFF
sec-Butylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:19	MFF
tert-Butylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:19	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00098	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:19	MFF
Carbon Disulfide	ND	0.0059	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:19	MFF
Carbon Tetrachloride	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:19	MFF
Chlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:19	MFF
Chlorodibromomethane	ND	0.00098	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:19	MFF
Chloroethane	ND	0.0098	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:19	MFF
Chloroform	ND	0.0039	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:19	MFF
Chloromethane	ND	0.0098	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:19	MFF
2-Chlorotoluene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:19	MFF
4-Chlorotoluene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:19	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:19	MFF
1,2-Dibromoethane (EDB)	ND	0.00098	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:19	MFF
Dibromomethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:19	MFF
1,2-Dichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:19	MFF
1,3-Dichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:19	MFF
1,4-Dichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:19	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0098	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:19	MFF
1,1-Dichloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:19	MFF
1,2-Dichloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:19	MFF
1,1-Dichloroethylene	ND	0.0039	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:19	MFF
cis-1,2-Dichloroethylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:19	MFF
trans-1,2-Dichloroethylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:19	MFF
1,2-Dichloropropane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:19	MFF
1,3-Dichloropropane	ND	0.00098	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:19	MFF
2,2-Dichloropropane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:19	MFF
1,1-Dichloropropene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:19	MFF
cis-1,3-Dichloropropene	ND	0.00098	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:19	MFF
trans-1,3-Dichloropropene	ND	0.00098	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:19	MFF
Diethyl Ether	ND	0.0098	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:19	MFF
Diisopropyl Ether (DIPE)	ND	0.00098	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:19	MFF
1,4-Dioxane	ND	0.098	mg/Kg dry	1	V-16	SW-846 8260C	3/5/19	3/5/19 14:19	MFF
Ethylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:19	MFF



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

Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-E7 (5-10)

Sampled: 3/1/2019 12:05

Sample ID: 19C0049-14

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:19	MFF
2-Hexanone (MBK)	ND	0.020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:19	MFF
Isopropylbenzene (Cumene)	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:19	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:19	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0039	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:19	MFF
Methylene Chloride	ND	0.0098	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:19	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:19	MFF
Naphthalene	ND	0.0039	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:19	MFF
n-Propylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:19	MFF
Styrene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:19	MFF
1,1,1,2-Tetrachloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:19	MFF
1,1,1,2,2-Tetrachloroethane	ND	0.00098	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:19	MFF
Tetrachloroethylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:19	MFF
Tetrahydrofuran	ND	0.0098	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:19	MFF
Toluene	0.0023	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:19	MFF
1,2,3-Trichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:19	MFF
1,2,4-Trichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:19	MFF
1,1,1-Trichloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:19	MFF
1,1,2-Trichloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:19	MFF
Trichloroethylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:19	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0098	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:19	MFF
1,2,3-Trichloropropane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:19	MFF
1,2,4-Trimethylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:19	MFF
1,3,5-Trimethylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:19	MFF
Vinyl Chloride	ND	0.0098	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:19	MFF
m+p Xylene	ND	0.0039	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:19	MFF
o-Xylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:19	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	103	70-130	3/5/19 14:19
Toluene-d8	97.9	70-130	3/5/19 14:19
4-Bromofluorobenzene	101	70-130	3/5/19 14:19

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-E7 (5-10)

Sampled: 3/1/2019 12:05

Sample ID: 19C0049-14

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatle Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.36	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:53	IMR
Acenaphthylene	ND	0.36	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:53	IMR
Acetophenone	ND	0.73	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:53	IMR
Aniline	ND	0.73	mg/Kg dry	2	L-04, V-34	SW-846 8270D	3/4/19	3/6/19 22:53	IMR
Anthracene	ND	0.36	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:53	IMR
Benzo(a)anthracene	ND	0.36	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:53	IMR
Benzo(a)pyrene	ND	0.36	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:53	IMR
Benzo(b)fluoranthene	ND	0.36	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:53	IMR
Benzo(g,h,i)perylene	ND	0.36	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:53	IMR
Benzo(k)fluoranthene	ND	0.36	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:53	IMR
Bis(2-chloroethoxy)methane	ND	0.73	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:53	IMR
Bis(2-chloroethyl)ether	ND	0.73	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:53	IMR
Bis(2-chloroisopropyl)ether	ND	0.73	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:53	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.73	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:53	IMR
4-Bromophenylphenylether	ND	0.73	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:53	IMR
Butylbenzylphthalate	ND	0.73	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:53	IMR
4-Chloroaniline	ND	1.4	mg/Kg dry	2	V-34	SW-846 8270D	3/4/19	3/6/19 22:53	IMR
2-Chloronaphthalene	ND	0.73	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:53	IMR
2-Chlorophenol	ND	0.73	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:53	IMR
Chrysene	ND	0.36	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:53	IMR
Dibenz(a,h)anthracene	ND	0.36	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:53	IMR
Dibenzofuran	ND	0.73	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:53	IMR
Di-n-butylphthalate	ND	0.73	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:53	IMR
1,2-Dichlorobenzene	ND	0.73	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:53	IMR
1,3-Dichlorobenzene	ND	0.73	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:53	IMR
1,4-Dichlorobenzene	ND	0.73	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:53	IMR
3,3-Dichlorobenzidine	ND	0.36	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:53	IMR
2,4-Dichlorophenol	ND	0.73	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:53	IMR
Diethylphthalate	ND	0.73	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:53	IMR
2,4-Dimethylphenol	ND	0.73	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:53	IMR
Dimethylphthalate	ND	0.73	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:53	IMR
2,4-Dinitrophenol	ND	1.4	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:53	IMR
2,4-Dinitrotoluene	ND	0.73	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:53	IMR
2,6-Dinitrotoluene	ND	0.73	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:53	IMR
Di-n-octylphthalate	ND	0.73	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:53	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.73	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:53	IMR
Fluoranthene	ND	0.36	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:53	IMR
Fluorene	ND	0.36	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:53	IMR
Hexachlorobenzene	ND	0.73	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:53	IMR
Hexachlorobutadiene	ND	0.73	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:53	IMR
Hexachloroethane	ND	0.73	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:53	IMR
Indeno(1,2,3-cd)pyrene	ND	0.36	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:53	IMR
Isophorone	ND	0.73	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:53	IMR
2-Methylnaphthalene	ND	0.36	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:53	IMR

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-E7 (5-10)

Sampled: 3/1/2019 12:05

Sample ID: 19C0049-14

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	0.73	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:53	IMR
3/4-Methylphenol	ND	0.73	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:53	IMR
Naphthalene	ND	0.36	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:53	IMR
Nitrobenzene	ND	0.73	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:53	IMR
2-Nitrophenol	ND	0.73	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:53	IMR
4-Nitrophenol	ND	1.4	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:53	IMR
Pentachlorophenol	ND	0.73	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:53	IMR
Phenanthrene	ND	0.36	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:53	IMR
Phenol	ND	0.73	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:53	IMR
Pyrene	ND	0.36	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:53	IMR
1,2,4-Trichlorobenzene	ND	0.73	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:53	IMR
2,4,5-Trichlorophenol	ND	0.73	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:53	IMR
2,4,6-Trichlorophenol	ND	0.73	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 22:53	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	65.8	30-130	
Phenol-d6	69.6	30-130	
Nitrobenzene-d5	70.0	30-130	
2-Fluorobiphenyl	71.4	30-130	
2,4,6-Tribromophenol	65.8	30-130	
p-Terphenyl-d14	78.8	30-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-E7 (5-10)

Sampled: 3/1/2019 12:05

Sample ID: 19C0049-14

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 2:39	JMB
Aroclor-1221 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 2:39	JMB
Aroclor-1232 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 2:39	JMB
Aroclor-1242 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 2:39	JMB
Aroclor-1248 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 2:39	JMB
Aroclor-1254 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 2:39	JMB
Aroclor-1260 [1]	ND	0.081	mg/Kg dry	4	R-05	SW-846 8082A	3/4/19	3/7/19 2:39	JMB
Aroclor-1262 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 2:39	JMB
Aroclor-1268 [1]	ND	0.081	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 2:39	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		91.1	30-150					3/7/19 2:39	
Decachlorobiphenyl [2]		83.1	30-150					3/7/19 2:39	
Tetrachloro-m-xylene [1]		99.0	30-150					3/7/19 2:39	
Tetrachloro-m-xylene [2]		94.3	30-150					3/7/19 2:39	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-E7 (5-10)

Sampled: 3/1/2019 12:05

Sample ID: 19C0049-14

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	160	89	mg/Kg dry	10		SW-846 8100 Modified	3/4/19	3/7/19 12:43	KLB
<b>Surrogates</b>		<b>% Recovery</b>	<b>Recovery Limits</b>		<b>Flag/Qual</b>				
2-Fluorobiphenyl		57.0	40-140					3/7/19 12:43	

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-E7 (5-10)

Sampled: 3/1/2019 12:05

Sample ID: 19C0049-14

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.8	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:17	QNW
Arsenic	3.7	1.8	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:17	QNW
Barium	22	1.8	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:17	QNW
Beryllium	0.23	0.18	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:17	QNW
Cadmium	0.22	0.18	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:17	QNW
Chromium	8.5	0.35	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:17	QNW
Lead	300	0.53	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:17	QNW
Mercury	ND	0.026	mg/Kg dry	1		SW-846 7471B	3/4/19	3/6/19 12:52	TBC
Nickel	7.2	0.35	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:17	QNW
Selenium	ND	3.5	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:17	QNW
Silver	ND	0.35	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:17	QNW
Thallium	ND	1.8	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:17	QNW
Vanadium	13	0.70	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:17	QNW
Zinc	44	0.70	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:17	QNW

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-E7 (5-10)

Sampled: 3/1/2019 12:05

Sample ID: 19C0049-14

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	92.8		% Wt	1		SM 2540G	3/2/19	3/3/19 14:15	VLH
Ignitability	Absent		present/absent	1		SW-846 1030	3/5/19	3/5/19 17:00	DJM
pH @19.5°C	7.6		pH Units	1		SW-846 9045C	3/1/19	3/1/19 21:15	AIA
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	3/2/19	3/5/19 14:15	DJM
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	3/2/19	3/5/19 13:45	DJM
Specific conductance	18	2.0	µmhos/cm	1		SM21-22 2510B Modified	3/7/19	3/7/19 12:00	EC

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-E6 (0-5)

Sampled: 3/1/2019 12:15

Sample ID: 19C0049-15

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.093	mg/Kg dry	1	R-05	SW-846 8260C	3/5/19	3/5/19 14:43	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00093	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:43	MFF
Benzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:43	MFF
Bromobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:43	MFF
Bromochloromethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:43	MFF
Bromodichloromethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:43	MFF
Bromoform	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:43	MFF
Bromomethane	ND	0.0093	mg/Kg dry	1	V-34	SW-846 8260C	3/5/19	3/5/19 14:43	MFF
2-Butanone (MEK)	ND	0.037	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:43	MFF
n-Butylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:43	MFF
sec-Butylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:43	MFF
tert-Butylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:43	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00093	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:43	MFF
Carbon Disulfide	ND	0.0056	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:43	MFF
Carbon Tetrachloride	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:43	MFF
Chlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:43	MFF
Chlorodibromomethane	ND	0.00093	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:43	MFF
Chloroethane	ND	0.0093	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:43	MFF
Chloroform	ND	0.0037	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:43	MFF
Chloromethane	ND	0.0093	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:43	MFF
2-Chlorotoluene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:43	MFF
4-Chlorotoluene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:43	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:43	MFF
1,2-Dibromoethane (EDB)	ND	0.00093	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:43	MFF
Dibromomethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:43	MFF
1,2-Dichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:43	MFF
1,3-Dichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:43	MFF
1,4-Dichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:43	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0093	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:43	MFF
1,1-Dichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:43	MFF
1,2-Dichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:43	MFF
1,1-Dichloroethylene	ND	0.0037	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:43	MFF
cis-1,2-Dichloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:43	MFF
trans-1,2-Dichloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:43	MFF
1,2-Dichloropropane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:43	MFF
1,3-Dichloropropane	ND	0.00093	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:43	MFF
2,2-Dichloropropane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:43	MFF
1,1-Dichloropropene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:43	MFF
cis-1,3-Dichloropropene	ND	0.00093	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:43	MFF
trans-1,3-Dichloropropene	ND	0.00093	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:43	MFF
Diethyl Ether	ND	0.0093	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:43	MFF
Diisopropyl Ether (DIPE)	ND	0.00093	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:43	MFF
1,4-Dioxane	ND	0.093	mg/Kg dry	1	V-16	SW-846 8260C	3/5/19	3/5/19 14:43	MFF
Ethylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:43	MFF



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-E6 (0-5)

Sampled: 3/1/2019 12:15

Sample ID: 19C0049-15

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:43	MFF
2-Hexanone (MBK)	ND	0.019	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:43	MFF
Isopropylbenzene (Cumene)	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:43	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:43	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0037	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:43	MFF
Methylene Chloride	ND	0.0093	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:43	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.019	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:43	MFF
Naphthalene	ND	0.0037	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:43	MFF
n-Propylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:43	MFF
Styrene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:43	MFF
1,1,1,2-Tetrachloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:43	MFF
1,1,1,2,2-Tetrachloroethane	ND	0.00093	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:43	MFF
Tetrachloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:43	MFF
Tetrahydrofuran	ND	0.0093	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:43	MFF
Toluene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:43	MFF
1,2,3-Trichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:43	MFF
1,2,4-Trichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:43	MFF
1,1,1-Trichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:43	MFF
1,1,2-Trichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:43	MFF
Trichloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:43	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0093	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:43	MFF
1,2,3-Trichloropropane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:43	MFF
1,2,4-Trimethylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:43	MFF
1,3,5-Trimethylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:43	MFF
Vinyl Chloride	ND	0.0093	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:43	MFF
m+p Xylene	ND	0.0037	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:43	MFF
o-Xylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 14:43	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	102	70-130	3/5/19 14:43
Toluene-d8	99.5	70-130	3/5/19 14:43
4-Bromofluorobenzene	100	70-130	3/5/19 14:43

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-E6 (0-5)

Sampled: 3/1/2019 12:15

Sample ID: 19C0049-15

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.94	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 23:21	IMR
Acenaphthylene	ND	0.94	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 23:21	IMR
Acetophenone	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 23:21	IMR
Aniline	ND	1.9	mg/Kg dry	5	L-04, V-34	SW-846 8270D	3/4/19	3/6/19 23:21	IMR
Anthracene	ND	0.94	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 23:21	IMR
Benzo(a)anthracene	1.6	0.94	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 23:21	IMR
Benzo(a)pyrene	1.7	0.94	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 23:21	IMR
Benzo(b)fluoranthene	2.0	0.94	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 23:21	IMR
Benzo(g,h,i)perylene	ND	0.94	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 23:21	IMR
Benzo(k)fluoranthene	ND	0.94	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 23:21	IMR
Bis(2-chloroethoxy)methane	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 23:21	IMR
Bis(2-chloroethyl)ether	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 23:21	IMR
Bis(2-chloroisopropyl)ether	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 23:21	IMR
Bis(2-Ethylhexyl)phthalate	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 23:21	IMR
4-Bromophenylphenylether	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 23:21	IMR
Butylbenzylphthalate	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 23:21	IMR
4-Chloroaniline	ND	3.7	mg/Kg dry	5	V-34	SW-846 8270D	3/4/19	3/6/19 23:21	IMR
2-Chloronaphthalene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 23:21	IMR
2-Chlorophenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 23:21	IMR
Chrysene	1.9	0.94	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 23:21	IMR
Dibenz(a,h)anthracene	ND	0.94	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 23:21	IMR
Dibenzofuran	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 23:21	IMR
Di-n-butylphthalate	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 23:21	IMR
1,2-Dichlorobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 23:21	IMR
1,3-Dichlorobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 23:21	IMR
1,4-Dichlorobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 23:21	IMR
3,3-Dichlorobenzidine	ND	0.94	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 23:21	IMR
2,4-Dichlorophenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 23:21	IMR
Diethylphthalate	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 23:21	IMR
2,4-Dimethylphenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 23:21	IMR
Dimethylphthalate	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 23:21	IMR
2,4-Dinitrophenol	ND	3.7	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 23:21	IMR
2,4-Dinitrotoluene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 23:21	IMR
2,6-Dinitrotoluene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 23:21	IMR
Di-n-octylphthalate	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 23:21	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 23:21	IMR
Fluoranthene	2.9	0.94	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 23:21	IMR
Fluorene	ND	0.94	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 23:21	IMR
Hexachlorobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 23:21	IMR
Hexachlorobutadiene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 23:21	IMR
Hexachloroethane	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 23:21	IMR
Indeno(1,2,3-cd)pyrene	0.96	0.94	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 23:21	IMR
Isophorone	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 23:21	IMR
2-Methylnaphthalene	ND	0.94	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 23:21	IMR

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-E6 (0-5)

Sampled: 3/1/2019 12:15

Sample ID: 19C0049-15

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 23:21	IMR
3/4-Methylphenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 23:21	IMR
Naphthalene	ND	0.94	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 23:21	IMR
Nitrobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 23:21	IMR
2-Nitrophenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 23:21	IMR
4-Nitrophenol	ND	3.7	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 23:21	IMR
Pentachlorophenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 23:21	IMR
Phenanthrene	1.4	0.94	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 23:21	IMR
Phenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 23:21	IMR
Pyrene	3.4	0.94	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 23:21	IMR
1,2,4-Trichlorobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 23:21	IMR
2,4,5-Trichlorophenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 23:21	IMR
2,4,6-Trichlorophenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 23:21	IMR
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2-Fluorophenol		49.8	30-130					3/6/19 23:21	
Phenol-d6		50.2	30-130					3/6/19 23:21	
Nitrobenzene-d5		55.0	30-130					3/6/19 23:21	
2-Fluorobiphenyl		56.0	30-130					3/6/19 23:21	
2,4,6-Tribromophenol		50.2	30-130					3/6/19 23:21	
p-Terphenyl-d14		61.0	30-130					3/6/19 23:21	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-E6 (0-5)

Sampled: 3/1/2019 12:15

Sample ID: 19C0049-15

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 2:56	JMB
Aroclor-1221 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 2:56	JMB
Aroclor-1232 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 2:56	JMB
Aroclor-1242 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 2:56	JMB
Aroclor-1248 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 2:56	JMB
Aroclor-1254 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 2:56	JMB
Aroclor-1260 [1]	ND	0.085	mg/Kg dry	4	R-05	SW-846 8082A	3/4/19	3/7/19 2:56	JMB
Aroclor-1262 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 2:56	JMB
Aroclor-1268 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 2:56	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		88.6	30-150					3/7/19 2:56	
Decachlorobiphenyl [2]		83.2	30-150					3/7/19 2:56	
Tetrachloro-m-xylene [1]		97.2	30-150					3/7/19 2:56	
Tetrachloro-m-xylene [2]		91.1	30-150					3/7/19 2:56	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-E6 (0-5)

Sampled: 3/1/2019 12:15

Sample ID: 19C0049-15

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	980	460	mg/Kg dry	50		SW-846 8100 Modified	3/4/19	3/7/19 3:06	RMW
<b>Surrogates</b>		<b>% Recovery</b>	<b>Recovery Limits</b>		<b>Flag/Qual</b>				
2-Fluorobiphenyl		*	40-140		S-01			3/7/19 3:06	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-E6 (0-5)

Sampled: 3/1/2019 12:15

Sample ID: 19C0049-15

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.9	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:22	QNW
Arsenic	5.1	1.9	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:22	QNW
Barium	28	1.9	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:22	QNW
Beryllium	0.32	0.19	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:22	QNW
Cadmium	0.41	0.19	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:22	QNW
Chromium	14	0.37	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:22	QNW
Lead	48	0.56	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:22	QNW
Mercury	ND	0.029	mg/Kg dry	1		SW-846 7471B	3/4/19	3/6/19 12:54	TBC
Nickel	11	0.37	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:22	QNW
Selenium	ND	3.7	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:22	QNW
Silver	ND	0.37	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:22	QNW
Thallium	ND	1.9	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:22	QNW
Vanadium	22	0.74	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:22	QNW
Zinc	48	0.74	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:22	QNW

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-E6 (0-5)

Sampled: 3/1/2019 12:15

Sample ID: 19C0049-15

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	90.1		% Wt	1		SM 2540G	3/2/19	3/3/19 14:15	VLH
Ignitability	Absent		present/absent	1		SW-846 1030	3/5/19	3/5/19 17:00	DJM
pH @19.6°C	8.1		pH Units	1		SW-846 9045C	3/1/19	3/1/19 21:58	AIA
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	3/5/19	3/6/19 13:45	DJM
Reactive Sulfide	ND	19	mg/Kg	1		SW-846 9030A	3/5/19	3/6/19 13:00	DJM
Specific conductance	9.3	2.0	µmhos/cm	1		SM21-22 2510B Modified	3/8/19	3/8/19 11:50	EC

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-E6 (5-10)

Sampled: 3/1/2019 12:20

Sample ID: 19C0049-16

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.097	mg/Kg dry	1	R-05	SW-846 8260C	3/5/19	3/5/19 15:08	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00097	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 15:08	MFF
Benzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 15:08	MFF
Bromobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 15:08	MFF
Bromochloromethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 15:08	MFF
Bromodichloromethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 15:08	MFF
Bromoform	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 15:08	MFF
Bromomethane	ND	0.0097	mg/Kg dry	1	V-34	SW-846 8260C	3/5/19	3/5/19 15:08	MFF
2-Butanone (MEK)	ND	0.039	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 15:08	MFF
n-Butylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 15:08	MFF
sec-Butylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 15:08	MFF
tert-Butylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 15:08	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00097	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 15:08	MFF
Carbon Disulfide	ND	0.0058	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 15:08	MFF
Carbon Tetrachloride	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 15:08	MFF
Chlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 15:08	MFF
Chlorodibromomethane	ND	0.00097	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 15:08	MFF
Chloroethane	ND	0.0097	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 15:08	MFF
Chloroform	ND	0.0039	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 15:08	MFF
Chloromethane	ND	0.0097	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 15:08	MFF
2-Chlorotoluene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 15:08	MFF
4-Chlorotoluene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 15:08	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 15:08	MFF
1,2-Dibromoethane (EDB)	ND	0.00097	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 15:08	MFF
Dibromomethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 15:08	MFF
1,2-Dichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 15:08	MFF
1,3-Dichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 15:08	MFF
1,4-Dichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 15:08	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0097	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 15:08	MFF
1,1-Dichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 15:08	MFF
1,2-Dichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 15:08	MFF
1,1-Dichloroethylene	ND	0.0039	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 15:08	MFF
cis-1,2-Dichloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 15:08	MFF
trans-1,2-Dichloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 15:08	MFF
1,2-Dichloropropane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 15:08	MFF
1,3-Dichloropropane	ND	0.00097	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 15:08	MFF
2,2-Dichloropropane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 15:08	MFF
1,1-Dichloropropene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 15:08	MFF
cis-1,3-Dichloropropene	ND	0.00097	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 15:08	MFF
trans-1,3-Dichloropropene	ND	0.00097	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 15:08	MFF
Diethyl Ether	ND	0.0097	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 15:08	MFF
Diisopropyl Ether (DIPE)	ND	0.00097	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 15:08	MFF
1,4-Dioxane	ND	0.097	mg/Kg dry	1	V-16	SW-846 8260C	3/5/19	3/5/19 15:08	MFF
Ethylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 15:08	MFF



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-E6 (5-10)

Sampled: 3/1/2019 12:20

Sample ID: 19C0049-16

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 15:08	MFF
2-Hexanone (MBK)	ND	0.019	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 15:08	MFF
Isopropylbenzene (Cumene)	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 15:08	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 15:08	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0039	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 15:08	MFF
Methylene Chloride	ND	0.0097	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 15:08	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.019	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 15:08	MFF
Naphthalene	ND	0.0039	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 15:08	MFF
n-Propylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 15:08	MFF
Styrene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 15:08	MFF
1,1,1,2-Tetrachloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 15:08	MFF
1,1,1,2,2-Tetrachloroethane	ND	0.00097	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 15:08	MFF
Tetrachloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 15:08	MFF
Tetrahydrofuran	ND	0.0097	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 15:08	MFF
Toluene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 15:08	MFF
1,2,3-Trichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 15:08	MFF
1,2,4-Trichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 15:08	MFF
1,1,1-Trichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 15:08	MFF
1,1,2-Trichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 15:08	MFF
Trichloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 15:08	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0097	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 15:08	MFF
1,2,3-Trichloropropane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 15:08	MFF
1,2,4-Trimethylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 15:08	MFF
1,3,5-Trimethylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 15:08	MFF
Vinyl Chloride	ND	0.0097	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 15:08	MFF
m+p Xylene	ND	0.0039	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 15:08	MFF
o-Xylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 15:08	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	104	70-130	3/5/19 15:08
Toluene-d8	98.9	70-130	3/5/19 15:08
4-Bromofluorobenzene	101	70-130	3/5/19 15:08

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-E6 (5-10)

Sampled: 3/1/2019 12:20

Sample ID: 19C0049-16

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.37	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 23:48	IMR
Acenaphthylene	ND	0.37	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 23:48	IMR
Acetophenone	ND	0.74	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 23:48	IMR
Aniline	ND	0.74	mg/Kg dry	2	L-04, V-34	SW-846 8270D	3/4/19	3/6/19 23:48	IMR
Anthracene	ND	0.37	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 23:48	IMR
Benzo(a)anthracene	ND	0.37	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 23:48	IMR
Benzo(a)pyrene	ND	0.37	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 23:48	IMR
Benzo(b)fluoranthene	ND	0.37	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 23:48	IMR
Benzo(g,h,i)perylene	ND	0.37	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 23:48	IMR
Benzo(k)fluoranthene	ND	0.37	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 23:48	IMR
Bis(2-chloroethoxy)methane	ND	0.74	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 23:48	IMR
Bis(2-chloroethyl)ether	ND	0.74	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 23:48	IMR
Bis(2-chloroisopropyl)ether	ND	0.74	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 23:48	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.74	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 23:48	IMR
4-Bromophenylphenylether	ND	0.74	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 23:48	IMR
Butylbenzylphthalate	ND	0.74	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 23:48	IMR
4-Chloroaniline	ND	1.4	mg/Kg dry	2	V-34	SW-846 8270D	3/4/19	3/6/19 23:48	IMR
2-Chloronaphthalene	ND	0.74	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 23:48	IMR
2-Chlorophenol	ND	0.74	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 23:48	IMR
Chrysene	ND	0.37	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 23:48	IMR
Dibenz(a,h)anthracene	ND	0.37	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 23:48	IMR
Dibenzofuran	ND	0.74	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 23:48	IMR
Di-n-butylphthalate	ND	0.74	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 23:48	IMR
1,2-Dichlorobenzene	ND	0.74	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 23:48	IMR
1,3-Dichlorobenzene	ND	0.74	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 23:48	IMR
1,4-Dichlorobenzene	ND	0.74	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 23:48	IMR
3,3-Dichlorobenzidine	ND	0.37	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 23:48	IMR
2,4-Dichlorophenol	ND	0.74	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 23:48	IMR
Diethylphthalate	ND	0.74	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 23:48	IMR
2,4-Dimethylphenol	ND	0.74	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 23:48	IMR
Dimethylphthalate	ND	0.74	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 23:48	IMR
2,4-Dinitrophenol	ND	1.4	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 23:48	IMR
2,4-Dinitrotoluene	ND	0.74	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 23:48	IMR
2,6-Dinitrotoluene	ND	0.74	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 23:48	IMR
Di-n-octylphthalate	ND	0.74	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 23:48	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.74	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 23:48	IMR
Fluoranthene	ND	0.37	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 23:48	IMR
Fluorene	ND	0.37	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 23:48	IMR
Hexachlorobenzene	ND	0.74	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 23:48	IMR
Hexachlorobutadiene	ND	0.74	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 23:48	IMR
Hexachloroethane	ND	0.74	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 23:48	IMR
Indeno(1,2,3-cd)pyrene	ND	0.37	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 23:48	IMR
Isophorone	ND	0.74	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 23:48	IMR
2-Methylnaphthalene	ND	0.37	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 23:48	IMR

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-E6 (5-10)

Sampled: 3/1/2019 12:20

Sample ID: 19C0049-16

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	0.74	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 23:48	IMR
3/4-Methylphenol	ND	0.74	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 23:48	IMR
Naphthalene	ND	0.37	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 23:48	IMR
Nitrobenzene	ND	0.74	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 23:48	IMR
2-Nitrophenol	ND	0.74	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 23:48	IMR
4-Nitrophenol	ND	1.4	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 23:48	IMR
Pentachlorophenol	ND	0.74	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 23:48	IMR
Phenanthrene	ND	0.37	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 23:48	IMR
Phenol	ND	0.74	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 23:48	IMR
Pyrene	ND	0.37	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 23:48	IMR
1,2,4-Trichlorobenzene	ND	0.74	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 23:48	IMR
2,4,5-Trichlorophenol	ND	0.74	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 23:48	IMR
2,4,6-Trichlorophenol	ND	0.74	mg/Kg dry	2		SW-846 8270D	3/4/19	3/6/19 23:48	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	68.4	30-130	
Phenol-d6	78.6	30-130	
Nitrobenzene-d5	84.7	30-130	
2-Fluorobiphenyl	93.6	30-130	
2,4,6-Tribromophenol	76.1	30-130	
p-Terphenyl-d14	109	30-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-E6 (5-10)

Sampled: 3/1/2019 12:20

Sample ID: 19C0049-16

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 3:14	JMB
Aroclor-1221 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 3:14	JMB
Aroclor-1232 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 3:14	JMB
Aroclor-1242 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 3:14	JMB
Aroclor-1248 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 3:14	JMB
Aroclor-1254 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 3:14	JMB
Aroclor-1260 [1]	ND	0.083	mg/Kg dry	4	R-05	SW-846 8082A	3/4/19	3/7/19 3:14	JMB
Aroclor-1262 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 3:14	JMB
Aroclor-1268 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 3:14	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		93.8	30-150					3/7/19 3:14	
Decachlorobiphenyl [2]		86.9	30-150					3/7/19 3:14	
Tetrachloro-m-xylene [1]		102	30-150					3/7/19 3:14	
Tetrachloro-m-xylene [2]		96.0	30-150					3/7/19 3:14	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-E6 (5-10)

Sampled: 3/1/2019 12:20

Sample ID: 19C0049-16

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	54	45	mg/Kg dry	5		SW-846 8100 Modified	3/4/19	3/7/19 12:23	KLB
<b>Surrogates</b>		<b>% Recovery</b>	<b>Recovery Limits</b>		<b>Flag/Qual</b>				
2-Fluorobiphenyl		74.5	40-140					3/7/19 12:23	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-E6 (5-10)

Sampled: 3/1/2019 12:20

Sample ID: 19C0049-16

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.9	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:27	QNW
Arsenic	4.4	1.9	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:27	QNW
Barium	27	1.9	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:27	QNW
Beryllium	0.33	0.19	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:27	QNW
Cadmium	0.29	0.19	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:27	QNW
Chromium	15	0.37	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:27	QNW
Lead	8.9	0.56	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:27	QNW
Mercury	ND	0.026	mg/Kg dry	1		SW-846 7471B	3/4/19	3/6/19 12:56	TBC
Nickel	10	0.37	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:27	QNW
Selenium	ND	3.7	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:27	QNW
Silver	ND	0.37	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:27	QNW
Thallium	ND	1.9	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:27	QNW
Vanadium	17	0.74	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:27	QNW
Zinc	26	0.74	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:27	QNW

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-E6 (5-10)

Sampled: 3/1/2019 12:20

Sample ID: 19C0049-16

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	90.7		% Wt	1		SM 2540G	3/2/19	3/3/19 14:15	VLH
Ignitability	Absent		present/absent	1		SW-846 1030	3/5/19	3/5/19 17:00	DJM
pH @20°C	8.3		pH Units	1		SW-846 9045C	3/1/19	3/1/19 22:20	AIA
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	3/5/19	3/6/19 13:45	DJM
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	3/5/19	3/6/19 13:00	DJM
Specific conductance	9.3	2.0	µmhos/cm	1		SM21-22 2510B Modified	3/8/19	3/8/19 11:50	EC

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-F5 (0-5)

Sampled: 3/1/2019 12:40

Sample ID: 19C0049-17

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.10	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 8:56	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.0010	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 8:56	MFF
Benzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 8:56	MFF
Bromobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 8:56	MFF
Bromochloromethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 8:56	MFF
Bromodichloromethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 8:56	MFF
Bromoform	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 8:56	MFF
Bromomethane	ND	0.010	mg/Kg dry	1	V-34	SW-846 8260C	3/5/19	3/5/19 8:56	MFF
2-Butanone (MEK)	ND	0.041	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 8:56	MFF
n-Butylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 8:56	MFF
sec-Butylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 8:56	MFF
tert-Butylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 8:56	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.0010	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 8:56	MFF
Carbon Disulfide	ND	0.0061	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 8:56	MFF
Carbon Tetrachloride	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 8:56	MFF
Chlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 8:56	MFF
Chlorodibromomethane	ND	0.0010	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 8:56	MFF
Chloroethane	ND	0.010	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 8:56	MFF
Chloroform	ND	0.0041	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 8:56	MFF
Chloromethane	ND	0.010	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 8:56	MFF
2-Chlorotoluene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 8:56	MFF
4-Chlorotoluene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 8:56	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0041	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 8:56	MFF
1,2-Dibromoethane (EDB)	ND	0.0010	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 8:56	MFF
Dibromomethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 8:56	MFF
1,2-Dichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 8:56	MFF
1,3-Dichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 8:56	MFF
1,4-Dichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 8:56	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.010	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 8:56	MFF
1,1-Dichloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 8:56	MFF
1,2-Dichloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 8:56	MFF
1,1-Dichloroethylene	ND	0.0041	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 8:56	MFF
cis-1,2-Dichloroethylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 8:56	MFF
trans-1,2-Dichloroethylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 8:56	MFF
1,2-Dichloropropane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 8:56	MFF
1,3-Dichloropropane	ND	0.0010	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 8:56	MFF
2,2-Dichloropropane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 8:56	MFF
1,1-Dichloropropene	ND	0.0041	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 8:56	MFF
cis-1,3-Dichloropropene	ND	0.0010	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 8:56	MFF
trans-1,3-Dichloropropene	ND	0.0010	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 8:56	MFF
Diethyl Ether	ND	0.010	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 8:56	MFF
Diisopropyl Ether (DIPE)	ND	0.0010	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 8:56	MFF
1,4-Dioxane	ND	0.20	mg/Kg dry	1	V-16	SW-846 8260C	3/5/19	3/5/19 8:56	MFF
Ethylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 8:56	MFF



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-F5 (0-5)

Sampled: 3/1/2019 12:40

Sample ID: 19C0049-17

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 8:56	MFF
2-Hexanone (MBK)	ND	0.020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 8:56	MFF
Isopropylbenzene (Cumene)	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 8:56	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 8:56	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0041	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 8:56	MFF
Methylene Chloride	ND	0.010	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 8:56	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 8:56	MFF
Naphthalene	ND	0.0041	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 8:56	MFF
n-Propylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 8:56	MFF
Styrene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 8:56	MFF
1,1,1,2-Tetrachloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 8:56	MFF
1,1,2,2-Tetrachloroethane	ND	0.0010	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 8:56	MFF
Tetrachloroethylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 8:56	MFF
Tetrahydrofuran	ND	0.010	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 8:56	MFF
Toluene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 8:56	MFF
1,2,3-Trichlorobenzene	ND	0.0041	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 8:56	MFF
1,2,4-Trichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 8:56	MFF
1,1,1-Trichloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 8:56	MFF
1,1,2-Trichloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 8:56	MFF
Trichloroethylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 8:56	MFF
Trichlorofluoromethane (Freon 11)	ND	0.010	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 8:56	MFF
1,2,3-Trichloropropane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 8:56	MFF
1,2,4-Trimethylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 8:56	MFF
1,3,5-Trimethylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 8:56	MFF
Vinyl Chloride	ND	0.010	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 8:56	MFF
m+p Xylene	ND	0.0041	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 8:56	MFF
o-Xylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 8:56	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	97.4	70-130	3/5/19 8:56
Toluene-d8	98.4	70-130	3/5/19 8:56
4-Bromofluorobenzene	99.0	70-130	3/5/19 8:56

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-F5 (0-5)

Sampled: 3/1/2019 12:40

Sample ID: 19C0049-17

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.97	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:15	IMR
Acenaphthylene	ND	0.97	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:15	IMR
Acetophenone	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:15	IMR
Aniline	ND	1.9	mg/Kg dry	5	L-04, V-34	SW-846 8270D	3/4/19	3/7/19 0:15	IMR
Anthracene	ND	0.97	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:15	IMR
Benzo(a)anthracene	1.0	0.97	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:15	IMR
Benzo(a)pyrene	1.1	0.97	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:15	IMR
Benzo(b)fluoranthene	1.5	0.97	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:15	IMR
Benzo(g,h,i)perylene	ND	0.97	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:15	IMR
Benzo(k)fluoranthene	ND	0.97	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:15	IMR
Bis(2-chloroethoxy)methane	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:15	IMR
Bis(2-chloroethyl)ether	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:15	IMR
Bis(2-chloroisopropyl)ether	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:15	IMR
Bis(2-Ethylhexyl)phthalate	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:15	IMR
4-Bromophenylphenylether	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:15	IMR
Butylbenzylphthalate	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:15	IMR
4-Chloroaniline	ND	3.8	mg/Kg dry	5	V-34	SW-846 8270D	3/4/19	3/7/19 0:15	IMR
2-Chloronaphthalene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:15	IMR
2-Chlorophenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:15	IMR
Chrysene	1.1	0.97	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:15	IMR
Dibenz(a,h)anthracene	ND	0.97	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:15	IMR
Dibenzofuran	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:15	IMR
Di-n-butylphthalate	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:15	IMR
1,2-Dichlorobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:15	IMR
1,3-Dichlorobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:15	IMR
1,4-Dichlorobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:15	IMR
3,3-Dichlorobenzidine	ND	0.97	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:15	IMR
2,4-Dichlorophenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:15	IMR
Diethylphthalate	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:15	IMR
2,4-Dimethylphenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:15	IMR
Dimethylphthalate	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:15	IMR
2,4-Dinitrophenol	ND	3.8	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:15	IMR
2,4-Dinitrotoluene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:15	IMR
2,6-Dinitrotoluene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:15	IMR
Di-n-octylphthalate	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:15	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:15	IMR
Fluoranthene	1.8	0.97	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:15	IMR
Fluorene	ND	0.97	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:15	IMR
Hexachlorobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:15	IMR
Hexachlorobutadiene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:15	IMR
Hexachloroethane	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:15	IMR
Indeno(1,2,3-cd)pyrene	ND	0.97	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:15	IMR
Isophorone	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:15	IMR
2-Methylnaphthalene	ND	0.97	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:15	IMR

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-F5 (0-5)

Sampled: 3/1/2019 12:40

Sample ID: 19C0049-17

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:15	IMR
3/4-Methylphenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:15	IMR
Naphthalene	ND	0.97	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:15	IMR
Nitrobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:15	IMR
2-Nitrophenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:15	IMR
4-Nitrophenol	ND	3.8	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:15	IMR
Pentachlorophenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:15	IMR
Phenanthrene	ND	0.97	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:15	IMR
Phenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:15	IMR
Pyrene	2.2	0.97	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:15	IMR
1,2,4-Trichlorobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:15	IMR
2,4,5-Trichlorophenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:15	IMR
2,4,6-Trichlorophenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:15	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	55.3	30-130	
Phenol-d6	55.2	30-130	
Nitrobenzene-d5	60.0	30-130	
2-Fluorobiphenyl	60.4	30-130	
2,4,6-Tribromophenol	54.1	30-130	
p-Terphenyl-d14	68.3	30-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-F5 (0-5)

Sampled: 3/1/2019 12:40

Sample ID: 19C0049-17

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.092	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 3:31	JMB
Aroclor-1221 [1]	ND	0.092	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 3:31	JMB
Aroclor-1232 [1]	ND	0.092	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 3:31	JMB
Aroclor-1242 [1]	ND	0.092	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 3:31	JMB
Aroclor-1248 [1]	ND	0.092	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 3:31	JMB
Aroclor-1254 [1]	ND	0.092	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 3:31	JMB
Aroclor-1260 [1]	ND	0.092	mg/Kg dry	4	R-05	SW-846 8082A	3/4/19	3/7/19 3:31	JMB
Aroclor-1262 [1]	ND	0.092	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 3:31	JMB
Aroclor-1268 [1]	ND	0.092	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 3:31	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		90.1	30-150					3/7/19 3:31	
Decachlorobiphenyl [2]		87.4	30-150					3/7/19 3:31	
Tetrachloro-m-xylene [1]		98.9	30-150					3/7/19 3:31	
Tetrachloro-m-xylene [2]		92.4	30-150					3/7/19 3:31	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-F5 (0-5)

Sampled: 3/1/2019 12:40

Sample ID: 19C0049-17

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	640	190	mg/Kg dry	20		SW-846 8100 Modified	3/4/19	3/7/19 14:25	KLB
Surrogates	% Recovery		Recovery Limits	Flag/Qual					
2-Fluorobiphenyl	*		40-140	S-01		3/7/19 14:25			

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-F5 (0-5)

Sampled: 3/1/2019 12:40

Sample ID: 19C0049-17

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	2.0	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:31	QNW
Arsenic	4.8	2.0	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:31	QNW
Barium	29	2.0	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:31	QNW
Beryllium	0.28	0.20	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:31	QNW
Cadmium	0.56	0.20	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:31	QNW
Chromium	21	0.39	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:31	QNW
Lead	25	0.59	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:31	QNW
Mercury	ND	0.028	mg/Kg dry	1		SW-846 7471B	3/4/19	3/6/19 12:57	TBC
Nickel	12	0.39	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:31	QNW
Selenium	ND	3.9	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:31	QNW
Silver	ND	0.39	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:31	QNW
Thallium	ND	2.0	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:31	QNW
Vanadium	20	0.78	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:31	QNW
Zinc	67	0.78	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:31	QNW

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-F5 (0-5)

Sampled: 3/1/2019 12:40

Sample ID: 19C0049-17

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	85.0		% Wt	1		SM 2540G	3/2/19	3/3/19 14:15	VLH
Ignitability	Absent		present/absent	1		SW-846 1030	3/5/19	3/5/19 17:00	DJM
pH @18.7°C	7.9		pH Units	1		SW-846 9045C	3/1/19	3/1/19 21:58	AIA
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	3/5/19	3/6/19 13:45	DJM
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	3/5/19	3/6/19 13:00	DJM
Specific conductance	9.0	2.0	µmhos/cm	1		SM21-22 2510B Modified	3/8/19	3/8/19 11:50	EC

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-F5 (5-10)

Sampled: 3/1/2019 12:45

Sample ID: 19C0049-18

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.092	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:24	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00092	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:24	MFF
Benzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:24	MFF
Bromobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:24	MFF
Bromochloromethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:24	MFF
Bromodichloromethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:24	MFF
Bromoform	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:24	MFF
Bromomethane	ND	0.0092	mg/Kg dry	1	V-34	SW-846 8260C	3/5/19	3/5/19 9:24	MFF
2-Butanone (MEK)	ND	0.037	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:24	MFF
n-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:24	MFF
sec-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:24	MFF
tert-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:24	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00092	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:24	MFF
Carbon Disulfide	ND	0.0055	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:24	MFF
Carbon Tetrachloride	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:24	MFF
Chlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:24	MFF
Chlorodibromomethane	ND	0.00092	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:24	MFF
Chloroethane	ND	0.0092	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:24	MFF
Chloroform	ND	0.0037	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:24	MFF
Chloromethane	ND	0.0092	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:24	MFF
2-Chlorotoluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:24	MFF
4-Chlorotoluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:24	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0037	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:24	MFF
1,2-Dibromoethane (EDB)	ND	0.00092	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:24	MFF
Dibromomethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:24	MFF
1,2-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:24	MFF
1,3-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:24	MFF
1,4-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:24	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0092	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:24	MFF
1,1-Dichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:24	MFF
1,2-Dichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:24	MFF
1,1-Dichloroethylene	ND	0.0037	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:24	MFF
cis-1,2-Dichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:24	MFF
trans-1,2-Dichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:24	MFF
1,2-Dichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:24	MFF
1,3-Dichloropropane	ND	0.00092	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:24	MFF
2,2-Dichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:24	MFF
1,1-Dichloropropene	ND	0.0037	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:24	MFF
cis-1,3-Dichloropropene	ND	0.00092	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:24	MFF
trans-1,3-Dichloropropene	ND	0.00092	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:24	MFF
Diethyl Ether	ND	0.0092	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:24	MFF
Diisopropyl Ether (DIPE)	ND	0.00092	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:24	MFF
1,4-Dioxane	ND	0.18	mg/Kg dry	1	V-16	SW-846 8260C	3/5/19	3/5/19 9:24	MFF
Ethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:24	MFF



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-F5 (5-10)

Sampled: 3/1/2019 12:45

Sample ID: 19C0049-18

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:24	MFF
2-Hexanone (MBK)	ND	0.018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:24	MFF
Isopropylbenzene (Cumene)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:24	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:24	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0037	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:24	MFF
Methylene Chloride	ND	0.0092	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:24	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:24	MFF
Naphthalene	ND	0.0037	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:24	MFF
n-Propylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:24	MFF
Styrene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:24	MFF
1,1,1,2-Tetrachloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:24	MFF
1,1,1,2,2-Tetrachloroethane	ND	0.00092	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:24	MFF
Tetrachloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:24	MFF
Tetrahydrofuran	ND	0.0092	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:24	MFF
Toluene	0.0040	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:24	MFF
1,2,3-Trichlorobenzene	ND	0.0037	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:24	MFF
1,2,4-Trichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:24	MFF
1,1,1-Trichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:24	MFF
1,1,2-Trichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:24	MFF
Trichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:24	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0092	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:24	MFF
1,2,3-Trichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:24	MFF
1,2,4-Trimethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:24	MFF
1,3,5-Trimethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:24	MFF
Vinyl Chloride	ND	0.0092	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:24	MFF
m+p Xylene	ND	0.0037	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:24	MFF
o-Xylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:24	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	98.1	70-130	3/5/19 9:24
Toluene-d8	97.2	70-130	3/5/19 9:24
4-Bromofluorobenzene	99.7	70-130	3/5/19 9:24

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-F5 (5-10)

Sampled: 3/1/2019 12:45

Sample ID: 19C0049-18

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.96	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:42	IMR
Acenaphthylene	ND	0.96	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:42	IMR
Acetophenone	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:42	IMR
Aniline	ND	1.9	mg/Kg dry	5	L-04, V-34	SW-846 8270D	3/4/19	3/7/19 0:42	IMR
Anthracene	ND	0.96	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:42	IMR
Benzo(a)anthracene	ND	0.96	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:42	IMR
Benzo(a)pyrene	ND	0.96	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:42	IMR
Benzo(b)fluoranthene	1.1	0.96	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:42	IMR
Benzo(g,h,i)perylene	ND	0.96	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:42	IMR
Benzo(k)fluoranthene	ND	0.96	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:42	IMR
Bis(2-chloroethoxy)methane	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:42	IMR
Bis(2-chloroethyl)ether	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:42	IMR
Bis(2-chloroisopropyl)ether	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:42	IMR
Bis(2-Ethylhexyl)phthalate	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:42	IMR
4-Bromophenylphenylether	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:42	IMR
Butylbenzylphthalate	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:42	IMR
4-Chloroaniline	ND	3.7	mg/Kg dry	5	V-34	SW-846 8270D	3/4/19	3/7/19 0:42	IMR
2-Chloronaphthalene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:42	IMR
2-Chlorophenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:42	IMR
Chrysene	ND	0.96	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:42	IMR
Dibenz(a,h)anthracene	ND	0.96	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:42	IMR
Dibenzofuran	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:42	IMR
Di-n-butylphthalate	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:42	IMR
1,2-Dichlorobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:42	IMR
1,3-Dichlorobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:42	IMR
1,4-Dichlorobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:42	IMR
3,3-Dichlorobenzidine	ND	0.96	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:42	IMR
2,4-Dichlorophenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:42	IMR
Diethylphthalate	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:42	IMR
2,4-Dimethylphenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:42	IMR
Dimethylphthalate	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:42	IMR
2,4-Dinitrophenol	ND	3.7	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:42	IMR
2,4-Dinitrotoluene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:42	IMR
2,6-Dinitrotoluene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:42	IMR
Di-n-octylphthalate	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:42	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:42	IMR
Fluoranthene	1.2	0.96	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:42	IMR
Fluorene	ND	0.96	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:42	IMR
Hexachlorobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:42	IMR
Hexachlorobutadiene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:42	IMR
Hexachloroethane	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:42	IMR
Indeno(1,2,3-cd)pyrene	ND	0.96	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:42	IMR
Isophorone	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:42	IMR
2-Methylnaphthalene	ND	0.96	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:42	IMR

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-F5 (5-10)

Sampled: 3/1/2019 12:45

Sample ID: 19C0049-18

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:42	IMR
3/4-Methylphenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:42	IMR
Naphthalene	ND	0.96	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:42	IMR
Nitrobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:42	IMR
2-Nitrophenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:42	IMR
4-Nitrophenol	ND	3.7	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:42	IMR
Pentachlorophenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:42	IMR
Phenanthrene	ND	0.96	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:42	IMR
Phenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:42	IMR
Pyrene	1.5	0.96	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:42	IMR
1,2,4-Trichlorobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:42	IMR
2,4,5-Trichlorophenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:42	IMR
2,4,6-Trichlorophenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/7/19 0:42	IMR
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2-Fluorophenol		50.3	30-130					3/7/19 0:42	
Phenol-d6		51.8	30-130					3/7/19 0:42	
Nitrobenzene-d5		56.9	30-130					3/7/19 0:42	
2-Fluorobiphenyl		57.5	30-130					3/7/19 0:42	
2,4,6-Tribromophenol		49.2	30-130					3/7/19 0:42	
p-Terphenyl-d14		62.6	30-130					3/7/19 0:42	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-F5 (5-10)

Sampled: 3/1/2019 12:45

Sample ID: 19C0049-18

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.087	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 3:49	JMB
Aroclor-1221 [1]	ND	0.087	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 3:49	JMB
Aroclor-1232 [1]	ND	0.087	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 3:49	JMB
Aroclor-1242 [1]	ND	0.087	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 3:49	JMB
Aroclor-1248 [1]	ND	0.087	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 3:49	JMB
Aroclor-1254 [1]	ND	0.087	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 3:49	JMB
Aroclor-1260 [1]	ND	0.087	mg/Kg dry	4	R-05	SW-846 8082A	3/4/19	3/7/19 3:49	JMB
Aroclor-1262 [1]	ND	0.087	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 3:49	JMB
Aroclor-1268 [1]	ND	0.087	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 3:49	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		82.4	30-150					3/7/19 3:49	
Decachlorobiphenyl [2]		79.2	30-150					3/7/19 3:49	
Tetrachloro-m-xylene [1]		92.0	30-150					3/7/19 3:49	
Tetrachloro-m-xylene [2]		84.5	30-150					3/7/19 3:49	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-F5 (5-10)

Sampled: 3/1/2019 12:45

Sample ID: 19C0049-18

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	680	190	mg/Kg dry	20		SW-846 8100 Modified	3/4/19	3/7/19 14:45	KLB
Surrogates	% Recovery		Recovery Limits	Flag/Qual					
2-Fluorobiphenyl	*		40-140	S-01		3/7/19 14:45			

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-F5 (5-10)

Sampled: 3/1/2019 12:45

Sample ID: 19C0049-18

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.9	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:36	QNW
Arsenic	4.4	1.9	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:36	QNW
Barium	28	1.9	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:36	QNW
Beryllium	0.31	0.19	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:36	QNW
Cadmium	0.49	0.19	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:36	QNW
Chromium	15	0.37	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:36	QNW
Lead	26	0.56	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:36	QNW
Mercury	ND	0.027	mg/Kg dry	1		SW-846 7471B	3/4/19	3/6/19 12:59	TBC
Nickel	11	0.37	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:36	QNW
Selenium	ND	3.7	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:36	QNW
Silver	ND	0.37	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:36	QNW
Thallium	ND	1.9	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:36	QNW
Vanadium	21	0.74	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:36	QNW
Zinc	49	0.74	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:36	QNW

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-F5 (5-10)

Sampled: 3/1/2019 12:45

Sample ID: 19C0049-18

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	88.1		% Wt	1		SM 2540G	3/2/19	3/3/19 14:15	VLH
Ignitability	Absent		present/absent	1		SW-846 1030	3/5/19	3/5/19 17:00	DJM
pH @18.6°C	8.0		pH Units	1		SW-846 9045C	3/1/19	3/1/19 21:15	AIA
Reactive Cyanide	ND	4.0	mg/Kg	1		SW-846 9014	3/5/19	3/6/19 13:45	DJM
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	3/5/19	3/6/19 13:00	DJM
Specific conductance	6.7	2.0	µmhos/cm	1		SM21-22 2510B Modified	3/8/19	3/8/19 11:50	EC

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-E5 (0-5)

Sampled: 3/1/2019 13:10

Sample ID: 19C0049-19

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.086	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00086	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
Benzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
Bromobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
Bromochloromethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
Bromodichloromethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
Bromoform	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
Bromomethane	ND	0.0086	mg/Kg dry	1	V-34	SW-846 8260C	3/5/19	3/5/19 9:51	MFF
2-Butanone (MEK)	ND	0.034	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
n-Butylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
sec-Butylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
tert-Butylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00086	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
Carbon Disulfide	ND	0.0051	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
Carbon Tetrachloride	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
Chlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
Chlorodibromomethane	ND	0.00086	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
Chloroethane	ND	0.0086	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
Chloroform	ND	0.0034	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
Chloromethane	ND	0.0086	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
2-Chlorotoluene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
4-Chlorotoluene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0034	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
1,2-Dibromoethane (EDB)	ND	0.00086	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
Dibromomethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
1,2-Dichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
1,3-Dichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
1,4-Dichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0086	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
1,1-Dichloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
1,2-Dichloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
1,1-Dichloroethylene	ND	0.0034	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
cis-1,2-Dichloroethylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
trans-1,2-Dichloroethylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
1,2-Dichloropropane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
1,3-Dichloropropane	ND	0.00086	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
2,2-Dichloropropane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
1,1-Dichloropropene	ND	0.0034	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
cis-1,3-Dichloropropene	ND	0.00086	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
trans-1,3-Dichloropropene	ND	0.00086	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
Diethyl Ether	ND	0.0086	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
Diisopropyl Ether (DIPE)	ND	0.00086	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
1,4-Dioxane	ND	0.17	mg/Kg dry	1	V-16	SW-846 8260C	3/5/19	3/5/19 9:51	MFF
Ethylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-E5 (0-5)

Sampled: 3/1/2019 13:10

Sample ID: 19C0049-19

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
2-Hexanone (MBK)	ND	0.017	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
Isopropylbenzene (Cumene)	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0034	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
Methylene Chloride	ND	0.0086	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.017	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
Naphthalene	ND	0.0034	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
n-Propylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
Styrene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
1,1,1,2-Tetrachloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
1,1,2,2-Tetrachloroethane	ND	0.00086	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
Tetrachloroethylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
Tetrahydrofuran	ND	0.0086	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
Toluene	0.0026	0.0017	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
1,2,3-Trichlorobenzene	ND	0.0034	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
1,2,4-Trichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
1,1,1-Trichloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
1,1,2-Trichloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
Trichloroethylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0086	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
1,2,3-Trichloropropane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
1,2,4-Trimethylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
1,3,5-Trimethylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
Vinyl Chloride	ND	0.0086	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
m+p Xylene	ND	0.0034	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF
o-Xylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 9:51	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	99.2	70-130	3/5/19 9:51
Toluene-d8	98.8	70-130	3/5/19 9:51
4-Bromofluorobenzene	103	70-130	3/5/19 9:51

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-E5 (0-5)

Sampled: 3/1/2019 13:10

Sample ID: 19C0049-19

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatle Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.94	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 16:23	IMR
Acenaphthylene	ND	0.94	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 16:23	IMR
Acetophenone	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 16:23	IMR
Aniline	ND	1.9	mg/Kg dry	5	L-04, V-34	SW-846 8270D	3/4/19	3/6/19 16:23	IMR
Anthracene	ND	0.94	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 16:23	IMR
Benzo(a)anthracene	ND	0.94	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 16:23	IMR
Benzo(a)pyrene	ND	0.94	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 16:23	IMR
Benzo(b)fluoranthene	0.98	0.94	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 16:23	IMR
Benzo(g,h,i)perylene	ND	0.94	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 16:23	IMR
Benzo(k)fluoranthene	ND	0.94	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 16:23	IMR
Bis(2-chloroethoxy)methane	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 16:23	IMR
Bis(2-chloroethyl)ether	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 16:23	IMR
Bis(2-chloroisopropyl)ether	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 16:23	IMR
Bis(2-Ethylhexyl)phthalate	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 16:23	IMR
4-Bromophenylphenylether	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 16:23	IMR
Butylbenzylphthalate	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 16:23	IMR
4-Chloroaniline	ND	3.6	mg/Kg dry	5	V-34	SW-846 8270D	3/4/19	3/6/19 16:23	IMR
2-Chloronaphthalene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 16:23	IMR
2-Chlorophenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 16:23	IMR
Chrysene	ND	0.94	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 16:23	IMR
Dibenz(a,h)anthracene	ND	0.94	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 16:23	IMR
Dibenzofuran	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 16:23	IMR
Di-n-butylphthalate	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 16:23	IMR
1,2-Dichlorobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 16:23	IMR
1,3-Dichlorobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 16:23	IMR
1,4-Dichlorobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 16:23	IMR
3,3-Dichlorobenzidine	ND	0.94	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 16:23	IMR
2,4-Dichlorophenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 16:23	IMR
Diethylphthalate	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 16:23	IMR
2,4-Dimethylphenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 16:23	IMR
Dimethylphthalate	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 16:23	IMR
2,4-Dinitrophenol	ND	3.6	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 16:23	IMR
2,4-Dinitrotoluene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 16:23	IMR
2,6-Dinitrotoluene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 16:23	IMR
Di-n-octylphthalate	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 16:23	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 16:23	IMR
Fluoranthene	1.4	0.94	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 16:23	IMR
Fluorene	ND	0.94	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 16:23	IMR
Hexachlorobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 16:23	IMR
Hexachlorobutadiene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 16:23	IMR
Hexachloroethane	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 16:23	IMR
Indeno(1,2,3-cd)pyrene	ND	0.94	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 16:23	IMR
Isophorone	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 16:23	IMR
2-Methylnaphthalene	ND	0.94	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 16:23	IMR

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-E5 (0-5)

Sampled: 3/1/2019 13:10

Sample ID: 19C0049-19

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 16:23	IMR
3/4-Methylphenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 16:23	IMR
Naphthalene	ND	0.94	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 16:23	IMR
Nitrobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 16:23	IMR
2-Nitrophenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 16:23	IMR
4-Nitrophenol	ND	3.6	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 16:23	IMR
Pentachlorophenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 16:23	IMR
Phenanthrene	ND	0.94	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 16:23	IMR
Phenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 16:23	IMR
Pyrene	1.4	0.94	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 16:23	IMR
1,2,4-Trichlorobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 16:23	IMR
2,4,5-Trichlorophenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 16:23	IMR
2,4,6-Trichlorophenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/4/19	3/6/19 16:23	IMR
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2-Fluorophenol		54.9	30-130					3/6/19 16:23	
Phenol-d6		55.8	30-130					3/6/19 16:23	
Nitrobenzene-d5		63.9	30-130					3/6/19 16:23	
2-Fluorobiphenyl		64.2	30-130					3/6/19 16:23	
2,4,6-Tribromophenol		55.2	30-130					3/6/19 16:23	
p-Terphenyl-d14		65.8	30-130					3/6/19 16:23	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-E5 (0-5)

Sampled: 3/1/2019 13:10

Sample ID: 19C0049-19

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 4:06	JMB
Aroclor-1221 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 4:06	JMB
Aroclor-1232 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 4:06	JMB
Aroclor-1242 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 4:06	JMB
Aroclor-1248 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 4:06	JMB
Aroclor-1254 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 4:06	JMB
Aroclor-1260 [1]	ND	0.085	mg/Kg dry	4	R-05	SW-846 8082A	3/4/19	3/7/19 4:06	JMB
Aroclor-1262 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 4:06	JMB
Aroclor-1268 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 4:06	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		86.6	30-150					3/7/19 4:06	
Decachlorobiphenyl [2]		81.5	30-150					3/7/19 4:06	
Tetrachloro-m-xylene [1]		97.8	30-150					3/7/19 4:06	
Tetrachloro-m-xylene [2]		91.3	30-150					3/7/19 4:06	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-E5 (0-5)

Sampled: 3/1/2019 13:10

Sample ID: 19C0049-19

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	590	180	mg/Kg dry	20		SW-846 8100 Modified	3/4/19	3/7/19 13:03	KLB
<b>Surrogates</b>		<b>% Recovery</b>	<b>Recovery Limits</b>		<b>Flag/Qual</b>				
2-Fluorobiphenyl		*	40-140		S-01			3/7/19 13:03	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-E5 (0-5)

Sampled: 3/1/2019 13:10

Sample ID: 19C0049-19

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.8	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:41	QNW
Arsenic	4.4	1.8	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:41	QNW
Barium	38	1.8	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:41	QNW
Beryllium	0.33	0.18	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:41	QNW
Cadmium	0.35	0.18	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:41	QNW
Chromium	15	0.36	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:41	QNW
Lead	26	0.54	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:41	QNW
Mercury	ND	0.026	mg/Kg dry	1		SW-846 7471B	3/4/19	3/6/19 13:00	TBC
Nickel	12	0.36	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:41	QNW
Selenium	ND	3.6	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:41	QNW
Silver	ND	0.36	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:41	QNW
Thallium	ND	1.8	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:41	QNW
Vanadium	26	0.72	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:41	QNW
Zinc	39	0.72	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:41	QNW

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-E5 (0-5)

Sampled: 3/1/2019 13:10

Sample ID: 19C0049-19

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	90.0		% Wt	1		SM 2540G	3/2/19	3/3/19 14:15	VLH
Ignitability	Absent		present/absent	1		SW-846 1030	3/5/19	3/5/19 17:00	DJM
pH @19°C	7.9		pH Units	1		SW-846 9045C	3/1/19	3/1/19 21:15	AIA
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	3/5/19	3/6/19 13:45	DJM
Reactive Sulfide	ND	19	mg/Kg	1		SW-846 9030A	3/5/19	3/6/19 13:00	DJM
Specific conductance	12	2.0	µmhos/cm	1		SM21-22 2510B Modified	3/8/19	3/8/19 11:50	EC

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-E5 (5-10)

Sampled: 3/1/2019 13:15

Sample ID: 19C0049-20

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.12	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:19	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:19	MFF
Benzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:19	MFF
Bromobenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:19	MFF
Bromochloromethane	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:19	MFF
Bromodichloromethane	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:19	MFF
Bromoform	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:19	MFF
Bromomethane	ND	0.012	mg/Kg dry	1	V-34	SW-846 8260C	3/5/19	3/5/19 10:19	MFF
2-Butanone (MEK)	ND	0.048	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:19	MFF
n-Butylbenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:19	MFF
sec-Butylbenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:19	MFF
tert-Butylbenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:19	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:19	MFF
Carbon Disulfide	ND	0.0072	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:19	MFF
Carbon Tetrachloride	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:19	MFF
Chlorobenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:19	MFF
Chlorodibromomethane	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:19	MFF
Chloroethane	ND	0.012	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:19	MFF
Chloroform	ND	0.0048	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:19	MFF
Chloromethane	ND	0.012	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:19	MFF
2-Chlorotoluene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:19	MFF
4-Chlorotoluene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:19	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0048	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:19	MFF
1,2-Dibromoethane (EDB)	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:19	MFF
Dibromomethane	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:19	MFF
1,2-Dichlorobenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:19	MFF
1,3-Dichlorobenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:19	MFF
1,4-Dichlorobenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:19	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.012	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:19	MFF
1,1-Dichloroethane	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:19	MFF
1,2-Dichloroethane	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:19	MFF
1,1-Dichloroethylene	ND	0.0048	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:19	MFF
cis-1,2-Dichloroethylene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:19	MFF
trans-1,2-Dichloroethylene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:19	MFF
1,2-Dichloropropane	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:19	MFF
1,3-Dichloropropane	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:19	MFF
2,2-Dichloropropane	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:19	MFF
1,1-Dichloropropene	ND	0.0048	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:19	MFF
cis-1,3-Dichloropropene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:19	MFF
trans-1,3-Dichloropropene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:19	MFF
Diethyl Ether	ND	0.012	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:19	MFF
Diisopropyl Ether (DIPE)	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:19	MFF
1,4-Dioxane	ND	0.24	mg/Kg dry	1	V-16	SW-846 8260C	3/5/19	3/5/19 10:19	MFF
Ethylbenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:19	MFF



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-E5 (5-10)

Sampled: 3/1/2019 13:15

Sample ID: 19C0049-20

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:19	MFF
2-Hexanone (MBK)	ND	0.024	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:19	MFF
Isopropylbenzene (Cumene)	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:19	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:19	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0048	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:19	MFF
Methylene Chloride	ND	0.012	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:19	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.024	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:19	MFF
Naphthalene	ND	0.0048	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:19	MFF
n-Propylbenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:19	MFF
Styrene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:19	MFF
1,1,1,2-Tetrachloroethane	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:19	MFF
1,1,2,2-Tetrachloroethane	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:19	MFF
Tetrachloroethylene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:19	MFF
Tetrahydrofuran	ND	0.012	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:19	MFF
Toluene	0.0028	0.0024	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:19	MFF
1,2,3-Trichlorobenzene	ND	0.0048	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:19	MFF
1,2,4-Trichlorobenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:19	MFF
1,1,1-Trichloroethane	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:19	MFF
1,1,2-Trichloroethane	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:19	MFF
Trichloroethylene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:19	MFF
Trichlorofluoromethane (Freon 11)	ND	0.012	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:19	MFF
1,2,3-Trichloropropane	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:19	MFF
1,2,4-Trimethylbenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:19	MFF
1,3,5-Trimethylbenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:19	MFF
Vinyl Chloride	ND	0.012	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:19	MFF
m+p Xylene	ND	0.0048	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:19	MFF
o-Xylene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:19	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	98.5	70-130	3/5/19 10:19
Toluene-d8	99.0	70-130	3/5/19 10:19
4-Bromofluorobenzene	98.5	70-130	3/5/19 10:19

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-E5 (5-10)

Sampled: 3/1/2019 13:15

Sample ID: 19C0049-20

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatle Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.37	mg/Kg dry	2		SW-846 8270D	3/4/19	3/7/19 13:43	IMR
Acenaphthylene	ND	0.37	mg/Kg dry	2		SW-846 8270D	3/4/19	3/7/19 13:43	IMR
Acetophenone	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/7/19 13:43	IMR
Aniline	ND	0.75	mg/Kg dry	2	L-04, MS-09	SW-846 8270D	3/4/19	3/7/19 13:43	IMR
Anthracene	ND	0.37	mg/Kg dry	2		SW-846 8270D	3/4/19	3/7/19 13:43	IMR
Benzo(a)anthracene	ND	0.37	mg/Kg dry	2		SW-846 8270D	3/4/19	3/7/19 13:43	IMR
Benzo(a)pyrene	ND	0.37	mg/Kg dry	2		SW-846 8270D	3/4/19	3/7/19 13:43	IMR
Benzo(b)fluoranthene	ND	0.37	mg/Kg dry	2		SW-846 8270D	3/4/19	3/7/19 13:43	IMR
Benzo(g,h,i)perylene	ND	0.37	mg/Kg dry	2		SW-846 8270D	3/4/19	3/7/19 13:43	IMR
Benzo(k)fluoranthene	ND	0.37	mg/Kg dry	2		SW-846 8270D	3/4/19	3/7/19 13:43	IMR
Bis(2-chloroethoxy)methane	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/7/19 13:43	IMR
Bis(2-chloroethyl)ether	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/7/19 13:43	IMR
Bis(2-chloroisopropyl)ether	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/7/19 13:43	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/7/19 13:43	IMR
4-Bromophenylphenylether	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/7/19 13:43	IMR
Butylbenzylphthalate	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/7/19 13:43	IMR
4-Chloroaniline	ND	1.5	mg/Kg dry	2	MS-09, V-34	SW-846 8270D	3/4/19	3/7/19 13:43	IMR
2-Chloronaphthalene	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/7/19 13:43	IMR
2-Chlorophenol	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/7/19 13:43	IMR
Chrysene	ND	0.37	mg/Kg dry	2		SW-846 8270D	3/4/19	3/7/19 13:43	IMR
Dibenz(a,h)anthracene	ND	0.37	mg/Kg dry	2		SW-846 8270D	3/4/19	3/7/19 13:43	IMR
Dibenzofuran	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/7/19 13:43	IMR
Di-n-butylphthalate	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/7/19 13:43	IMR
1,2-Dichlorobenzene	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/7/19 13:43	IMR
1,3-Dichlorobenzene	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/7/19 13:43	IMR
1,4-Dichlorobenzene	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/7/19 13:43	IMR
3,3-Dichlorobenzidine	ND	0.37	mg/Kg dry	2	MS-09	SW-846 8270D	3/4/19	3/7/19 13:43	IMR
2,4-Dichlorophenol	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/7/19 13:43	IMR
Diethylphthalate	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/7/19 13:43	IMR
2,4-Dimethylphenol	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/7/19 13:43	IMR
Dimethylphthalate	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/7/19 13:43	IMR
2,4-Dinitrophenol	ND	1.5	mg/Kg dry	2	V-05	SW-846 8270D	3/4/19	3/7/19 13:43	IMR
2,4-Dinitrotoluene	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/7/19 13:43	IMR
2,6-Dinitrotoluene	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/7/19 13:43	IMR
Di-n-octylphthalate	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/7/19 13:43	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/7/19 13:43	IMR
Fluoranthene	ND	0.37	mg/Kg dry	2		SW-846 8270D	3/4/19	3/7/19 13:43	IMR
Fluorene	ND	0.37	mg/Kg dry	2		SW-846 8270D	3/4/19	3/7/19 13:43	IMR
Hexachlorobenzene	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/7/19 13:43	IMR
Hexachlorobutadiene	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/7/19 13:43	IMR
Hexachloroethane	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/7/19 13:43	IMR
Indeno(1,2,3-cd)pyrene	ND	0.37	mg/Kg dry	2		SW-846 8270D	3/4/19	3/7/19 13:43	IMR
Isophorone	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/7/19 13:43	IMR
2-Methylnaphthalene	ND	0.37	mg/Kg dry	2		SW-846 8270D	3/4/19	3/7/19 13:43	IMR

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-E5 (5-10)

Sampled: 3/1/2019 13:15

Sample ID: 19C0049-20

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/7/19 13:43	IMR
3/4-Methylphenol	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/7/19 13:43	IMR
Naphthalene	ND	0.37	mg/Kg dry	2		SW-846 8270D	3/4/19	3/7/19 13:43	IMR
Nitrobenzene	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/7/19 13:43	IMR
2-Nitrophenol	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/7/19 13:43	IMR
4-Nitrophenol	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/4/19	3/7/19 13:43	IMR
Pentachlorophenol	ND	0.75	mg/Kg dry	2	MS-09	SW-846 8270D	3/4/19	3/7/19 13:43	IMR
Phenanthrene	ND	0.37	mg/Kg dry	2		SW-846 8270D	3/4/19	3/7/19 13:43	IMR
Phenol	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/7/19 13:43	IMR
Pyrene	0.40	0.37	mg/Kg dry	2		SW-846 8270D	3/4/19	3/7/19 13:43	IMR
1,2,4-Trichlorobenzene	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/7/19 13:43	IMR
2,4,5-Trichlorophenol	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/7/19 13:43	IMR
2,4,6-Trichlorophenol	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/4/19	3/7/19 13:43	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	45.2	30-130	
Phenol-d6	51.1	30-130	
Nitrobenzene-d5	47.0	30-130	
2-Fluorobiphenyl	47.0	30-130	
2,4,6-Tribromophenol	44.8	30-130	
p-Terphenyl-d14	63.3	30-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-E5 (5-10)

Sampled: 3/1/2019 13:15

Sample ID: 19C0049-20

Sample Matrix: Soil

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 4:24	JMB
Aroclor-1221 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 4:24	JMB
Aroclor-1232 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 4:24	JMB
Aroclor-1242 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 4:24	JMB
Aroclor-1248 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 4:24	JMB
Aroclor-1254 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 4:24	JMB
Aroclor-1260 [1]	ND	0.082	mg/Kg dry	4	R-05	SW-846 8082A	3/4/19	3/7/19 4:24	JMB
Aroclor-1262 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 4:24	JMB
Aroclor-1268 [1]	ND	0.082	mg/Kg dry	4		SW-846 8082A	3/4/19	3/7/19 4:24	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		84.6	30-150					3/7/19 4:24	
Decachlorobiphenyl [2]		77.9	30-150					3/7/19 4:24	
Tetrachloro-m-xylene [1]		97.2	30-150					3/7/19 4:24	
Tetrachloro-m-xylene [2]		90.8	30-150					3/7/19 4:24	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-E5 (5-10)

Sampled: 3/1/2019 13:15

Sample ID: 19C0049-20

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	470	180	mg/Kg dry	20		SW-846 8100 Modified	3/4/19	3/7/19 13:24	KLB
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
2-Fluorobiphenyl		*	40-140		S-01			3/7/19 13:24	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-E5 (5-10)

Sampled: 3/1/2019 13:15

Sample ID: 19C0049-20

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.8	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:46	QNW
Arsenic	5.9	1.8	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:46	QNW
Barium	26	1.8	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:46	QNW
Beryllium	0.38	0.18	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:46	QNW
Cadmium	0.33	0.18	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:46	QNW
Chromium	15	0.36	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:46	QNW
Lead	19	0.54	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:46	QNW
Mercury	ND	0.026	mg/Kg dry	1		SW-846 7471B	3/4/19	3/6/19 13:02	TBC
Nickel	13	0.36	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:46	QNW
Selenium	ND	3.6	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:46	QNW
Silver	ND	0.36	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:46	QNW
Thallium	ND	1.8	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:46	QNW
Vanadium	24	0.72	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:46	QNW
Zinc	33	0.72	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 12:46	QNW

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-E5 (5-10)

Sampled: 3/1/2019 13:15

Sample ID: 19C0049-20

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	90.7		% Wt	1		SM 2540G	3/2/19	3/3/19 14:15	VLH
Ignitability	Absent		present/absent	1		SW-846 1030	3/5/19	3/5/19 17:00	DJM
pH @19.5°C	8.6		pH Units	1		SW-846 9045C	3/1/19	3/1/19 22:20	AIA
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	3/5/19	3/6/19 13:45	DJM
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	3/5/19	3/6/19 13:00	DJM
Specific conductance	11	2.0	µmhos/cm	1		SM21-22 2510B Modified	3/8/19	3/8/19 11:50	EC

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-E5 (10-15)

Sampled: 3/1/2019 13:20

Sample ID: 19C0049-21

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.091	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:46	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00091	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:46	MFF
Benzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:46	MFF
Bromobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:46	MFF
Bromochloromethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:46	MFF
Bromodichloromethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:46	MFF
Bromoform	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:46	MFF
Bromomethane	ND	0.0091	mg/Kg dry	1	V-34	SW-846 8260C	3/5/19	3/5/19 10:46	MFF
2-Butanone (MEK)	ND	0.036	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:46	MFF
n-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:46	MFF
sec-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:46	MFF
tert-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:46	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00091	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:46	MFF
Carbon Disulfide	ND	0.0055	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:46	MFF
Carbon Tetrachloride	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:46	MFF
Chlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:46	MFF
Chlorodibromomethane	ND	0.00091	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:46	MFF
Chloroethane	ND	0.0091	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:46	MFF
Chloroform	ND	0.0036	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:46	MFF
Chloromethane	ND	0.0091	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:46	MFF
2-Chlorotoluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:46	MFF
4-Chlorotoluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:46	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0036	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:46	MFF
1,2-Dibromoethane (EDB)	ND	0.00091	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:46	MFF
Dibromomethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:46	MFF
1,2-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:46	MFF
1,3-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:46	MFF
1,4-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:46	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0091	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:46	MFF
1,1-Dichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:46	MFF
1,2-Dichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:46	MFF
1,1-Dichloroethylene	ND	0.0036	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:46	MFF
cis-1,2-Dichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:46	MFF
trans-1,2-Dichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:46	MFF
1,2-Dichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:46	MFF
1,3-Dichloropropane	ND	0.00091	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:46	MFF
2,2-Dichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:46	MFF
1,1-Dichloropropene	ND	0.0036	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:46	MFF
cis-1,3-Dichloropropene	ND	0.00091	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:46	MFF
trans-1,3-Dichloropropene	ND	0.00091	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:46	MFF
Diethyl Ether	ND	0.0091	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:46	MFF
Diisopropyl Ether (DIPE)	ND	0.00091	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:46	MFF
1,4-Dioxane	ND	0.18	mg/Kg dry	1	V-16	SW-846 8260C	3/5/19	3/5/19 10:46	MFF
Ethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:46	MFF



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-E5 (10-15)

Sampled: 3/1/2019 13:20

Sample ID: 19C0049-21

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:46	MFF
2-Hexanone (MBK)	ND	0.018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:46	MFF
Isopropylbenzene (Cumene)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:46	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:46	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0036	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:46	MFF
Methylene Chloride	ND	0.0091	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:46	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:46	MFF
Naphthalene	ND	0.0036	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:46	MFF
n-Propylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:46	MFF
Styrene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:46	MFF
1,1,1,2-Tetrachloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:46	MFF
1,1,1,2,2-Tetrachloroethane	ND	0.00091	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:46	MFF
Tetrachloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:46	MFF
Tetrahydrofuran	ND	0.0091	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:46	MFF
Toluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:46	MFF
1,2,3-Trichlorobenzene	ND	0.0036	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:46	MFF
1,2,4-Trichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:46	MFF
1,1,1-Trichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:46	MFF
1,1,2-Trichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:46	MFF
Trichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:46	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0091	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:46	MFF
1,2,3-Trichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:46	MFF
1,2,4-Trimethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:46	MFF
1,3,5-Trimethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:46	MFF
Vinyl Chloride	ND	0.0091	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:46	MFF
m+p Xylene	ND	0.0036	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:46	MFF
o-Xylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 10:46	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	96.4	70-130	3/5/19 10:46
Toluene-d8	97.9	70-130	3/5/19 10:46
4-Bromofluorobenzene	100	70-130	3/5/19 10:46

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-E5 (10-15)

Sampled: 3/1/2019 13:20

Sample ID: 19C0049-21

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.19	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:03	IMR
Acenaphthylene	ND	0.19	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:03	IMR
Acetophenone	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:03	IMR
Aniline	ND	0.38	mg/Kg dry	1	V-34	SW-846 8270D	3/4/19	3/5/19 18:03	IMR
Anthracene	ND	0.19	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:03	IMR
Benzo(a)anthracene	ND	0.19	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:03	IMR
Benzo(a)pyrene	ND	0.19	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:03	IMR
Benzo(b)fluoranthene	ND	0.19	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:03	IMR
Benzo(g,h,i)perylene	ND	0.19	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:03	IMR
Benzo(k)fluoranthene	ND	0.19	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:03	IMR
Bis(2-chloroethoxy)methane	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:03	IMR
Bis(2-chloroethyl)ether	ND	0.38	mg/Kg dry	1	V-20	SW-846 8270D	3/4/19	3/5/19 18:03	IMR
Bis(2-chloroisopropyl)ether	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:03	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:03	IMR
4-Bromophenylphenylether	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:03	IMR
Butylbenzylphthalate	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:03	IMR
4-Chloroaniline	ND	0.74	mg/Kg dry	1	V-34	SW-846 8270D	3/4/19	3/5/19 18:03	IMR
2-Chloronaphthalene	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:03	IMR
2-Chlorophenol	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:03	IMR
Chrysene	ND	0.19	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:03	IMR
Dibenz(a,h)anthracene	ND	0.19	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:03	IMR
Dibenzofuran	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:03	IMR
Di-n-butylphthalate	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:03	IMR
1,2-Dichlorobenzene	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:03	IMR
1,3-Dichlorobenzene	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:03	IMR
1,4-Dichlorobenzene	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:03	IMR
3,3-Dichlorobenzidine	ND	0.19	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:03	IMR
2,4-Dichlorophenol	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:03	IMR
Diethylphthalate	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:03	IMR
2,4-Dimethylphenol	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:03	IMR
Dimethylphthalate	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:03	IMR
2,4-Dinitrophenol	ND	0.74	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:03	IMR
2,4-Dinitrotoluene	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:03	IMR
2,6-Dinitrotoluene	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:03	IMR
Di-n-octylphthalate	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:03	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.38	mg/Kg dry	1	V-20	SW-846 8270D	3/4/19	3/5/19 18:03	IMR
Fluoranthene	ND	0.19	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:03	IMR
Fluorene	ND	0.19	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:03	IMR
Hexachlorobenzene	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:03	IMR
Hexachlorobutadiene	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:03	IMR
Hexachloroethane	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:03	IMR
Indeno(1,2,3-cd)pyrene	ND	0.19	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:03	IMR
Isophorone	ND	0.38	mg/Kg dry	1	V-20	SW-846 8270D	3/4/19	3/5/19 18:03	IMR
2-Methylnaphthalene	ND	0.19	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:03	IMR

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-E5 (10-15)

Sampled: 3/1/2019 13:20

Sample ID: 19C0049-21

Sample Matrix: Soil

Semivolatle Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:03	IMR
3/4-Methylphenol	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:03	IMR
Naphthalene	ND	0.19	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:03	IMR
Nitrobenzene	ND	0.38	mg/Kg dry	1	V-20	SW-846 8270D	3/4/19	3/5/19 18:03	IMR
2-Nitrophenol	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:03	IMR
4-Nitrophenol	ND	0.74	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:03	IMR
Pentachlorophenol	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:03	IMR
Phenanthrene	ND	0.19	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:03	IMR
Phenol	ND	0.38	mg/Kg dry	1	V-20	SW-846 8270D	3/4/19	3/5/19 18:03	IMR
Pyrene	ND	0.19	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:03	IMR
1,2,4-Trichlorobenzene	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:03	IMR
2,4,5-Trichlorophenol	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:03	IMR
2,4,6-Trichlorophenol	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:03	IMR
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2-Fluorophenol		74.5	30-130					3/5/19 18:03	
Phenol-d6		80.0	30-130					3/5/19 18:03	
Nitrobenzene-d5		82.8	30-130					3/5/19 18:03	
2-Fluorobiphenyl		76.7	30-130					3/5/19 18:03	
2,4,6-Tribromophenol		68.3	30-130					3/5/19 18:03	
p-Terphenyl-d14		91.3	30-130					3/5/19 18:03	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-E5 (10-15)

Sampled: 3/1/2019 13:20

Sample ID: 19C0049-21

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 17:06	JMB
Aroclor-1221 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 17:06	JMB
Aroclor-1232 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 17:06	JMB
Aroclor-1242 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 17:06	JMB
Aroclor-1248 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 17:06	JMB
Aroclor-1254 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 17:06	JMB
Aroclor-1260 [1]	ND	0.085	mg/Kg dry	4	R-05	SW-846 8082A	3/4/19	3/6/19 17:06	JMB
Aroclor-1262 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 17:06	JMB
Aroclor-1268 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 17:06	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		77.0	30-150					3/6/19 17:06	
Decachlorobiphenyl [2]		74.6	30-150					3/6/19 17:06	
Tetrachloro-m-xylene [1]		78.1	30-150					3/6/19 17:06	
Tetrachloro-m-xylene [2]		78.2	30-150					3/6/19 17:06	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-E5 (10-15)

Sampled: 3/1/2019 13:20

Sample ID: 19C0049-21

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	110	47	mg/Kg dry	5		SW-846 8100 Modified	3/4/19	3/6/19 18:38	RMW
<b>Surrogates</b>		<b>% Recovery</b>	<b>Recovery Limits</b>		<b>Flag/Qual</b>				
2-Fluorobiphenyl		66.2	40-140					3/6/19 18:38	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-E5 (10-15)

Sampled: 3/1/2019 13:20

Sample ID: 19C0049-21

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.9	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 14:13	QNW
Arsenic	4.3	1.9	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 14:13	QNW
Barium	29	1.9	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 14:13	QNW
Beryllium	0.30	0.19	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 14:13	QNW
Cadmium	0.31	0.19	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 14:13	QNW
Chromium	14	0.38	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 14:13	QNW
Lead	37	0.56	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 14:13	QNW
Mercury	ND	0.028	mg/Kg dry	1		SW-846 7471B	3/4/19	3/6/19 11:56	TBC
Nickel	11	0.38	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 14:13	QNW
Selenium	ND	3.8	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 14:13	QNW
Silver	ND	0.38	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 14:13	QNW
Thallium	ND	1.9	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 14:13	QNW
Vanadium	17	0.75	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 14:13	QNW
Zinc	48	0.75	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 14:13	QNW

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-E5 (10-15)

Sampled: 3/1/2019 13:20

Sample ID: 19C0049-21

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	88.4		% Wt	1		SM 2540G	3/2/19	3/3/19 14:16	VLH
Ignitability	Absent		present/absent	1		SW-846 1030	3/5/19	3/5/19 17:00	DJM
pH @19.2°C	7.7		pH Units	1		SW-846 9045C	3/1/19	3/1/19 21:15	AIA
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	3/5/19	3/6/19 13:45	DJM
Reactive Sulfide	ND	19	mg/Kg	1		SW-846 9030A	3/5/19	3/6/19 13:00	DJM
Specific conductance	7.0	2.0	µmhos/cm	1		SM21-22 2510B Modified	3/8/19	3/8/19 11:50	EC

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-F4 (0-5)

Sampled: 3/1/2019 13:50

Sample ID: 19C0049-22

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.081	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:13	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00081	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:13	MFF
Benzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:13	MFF
Bromobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:13	MFF
Bromochloromethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:13	MFF
Bromodichloromethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:13	MFF
Bromoform	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:13	MFF
Bromomethane	ND	0.0081	mg/Kg dry	1	V-34	SW-846 8260C	3/5/19	3/5/19 11:13	MFF
2-Butanone (MEK)	ND	0.032	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:13	MFF
n-Butylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:13	MFF
sec-Butylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:13	MFF
tert-Butylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:13	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00081	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:13	MFF
Carbon Disulfide	ND	0.0048	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:13	MFF
Carbon Tetrachloride	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:13	MFF
Chlorobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:13	MFF
Chlorodibromomethane	ND	0.00081	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:13	MFF
Chloroethane	ND	0.0081	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:13	MFF
Chloroform	ND	0.0032	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:13	MFF
Chloromethane	ND	0.0081	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:13	MFF
2-Chlorotoluene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:13	MFF
4-Chlorotoluene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:13	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0032	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:13	MFF
1,2-Dibromoethane (EDB)	ND	0.00081	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:13	MFF
Dibromomethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:13	MFF
1,2-Dichlorobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:13	MFF
1,3-Dichlorobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:13	MFF
1,4-Dichlorobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:13	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0081	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:13	MFF
1,1-Dichloroethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:13	MFF
1,2-Dichloroethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:13	MFF
1,1-Dichloroethylene	ND	0.0032	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:13	MFF
cis-1,2-Dichloroethylene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:13	MFF
trans-1,2-Dichloroethylene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:13	MFF
1,2-Dichloropropane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:13	MFF
1,3-Dichloropropane	ND	0.00081	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:13	MFF
2,2-Dichloropropane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:13	MFF
1,1-Dichloropropene	ND	0.0032	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:13	MFF
cis-1,3-Dichloropropene	ND	0.00081	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:13	MFF
trans-1,3-Dichloropropene	ND	0.00081	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:13	MFF
Diethyl Ether	ND	0.0081	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:13	MFF
Diisopropyl Ether (DIPE)	ND	0.00081	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:13	MFF
1,4-Dioxane	ND	0.16	mg/Kg dry	1	V-16	SW-846 8260C	3/5/19	3/5/19 11:13	MFF
Ethylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:13	MFF



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-F4 (0-5)

Sampled: 3/1/2019 13:50

Sample ID: 19C0049-22

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:13	MFF
2-Hexanone (MBK)	ND	0.016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:13	MFF
Isopropylbenzene (Cumene)	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:13	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:13	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0032	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:13	MFF
Methylene Chloride	ND	0.0081	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:13	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:13	MFF
Naphthalene	ND	0.0032	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:13	MFF
n-Propylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:13	MFF
Styrene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:13	MFF
1,1,1,2-Tetrachloroethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:13	MFF
1,1,2,2-Tetrachloroethane	ND	0.00081	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:13	MFF
Tetrachloroethylene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:13	MFF
Tetrahydrofuran	ND	0.0081	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:13	MFF
Toluene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:13	MFF
1,2,3-Trichlorobenzene	ND	0.0032	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:13	MFF
1,2,4-Trichlorobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:13	MFF
1,1,1-Trichloroethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:13	MFF
1,1,2-Trichloroethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:13	MFF
Trichloroethylene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:13	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0081	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:13	MFF
1,2,3-Trichloropropane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:13	MFF
1,2,4-Trimethylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:13	MFF
1,3,5-Trimethylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:13	MFF
Vinyl Chloride	ND	0.0081	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:13	MFF
m+p Xylene	ND	0.0032	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:13	MFF
o-Xylene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:13	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	98.4	70-130	3/5/19 11:13
Toluene-d8	97.4	70-130	3/5/19 11:13
4-Bromofluorobenzene	98.1	70-130	3/5/19 11:13

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-F4 (0-5)

Sampled: 3/1/2019 13:50

Sample ID: 19C0049-22

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.20	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:26	IMR
Acenaphthylene	ND	0.20	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:26	IMR
Acetophenone	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:26	IMR
Aniline	ND	0.39	mg/Kg dry	1	MS-09, V-34	SW-846 8270D	3/4/19	3/5/19 18:26	IMR
Anthracene	ND	0.20	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:26	IMR
Benzo(a)anthracene	0.49	0.20	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:26	IMR
Benzo(a)pyrene	0.53	0.20	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:26	IMR
Benzo(b)fluoranthene	0.60	0.20	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:26	IMR
Benzo(g,h,i)perylene	0.25	0.20	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:26	IMR
Benzo(k)fluoranthene	0.26	0.20	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:26	IMR
Bis(2-chloroethoxy)methane	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:26	IMR
Bis(2-chloroethyl)ether	ND	0.39	mg/Kg dry	1	V-20	SW-846 8270D	3/4/19	3/5/19 18:26	IMR
Bis(2-chloroisopropyl)ether	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:26	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:26	IMR
4-Bromophenylphenylether	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:26	IMR
Butylbenzylphthalate	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:26	IMR
4-Chloroaniline	ND	0.77	mg/Kg dry	1	MS-09, V-34	SW-846 8270D	3/4/19	3/5/19 18:26	IMR
2-Chloronaphthalene	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:26	IMR
2-Chlorophenol	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:26	IMR
Chrysene	0.56	0.20	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:26	IMR
Dibenz(a,h)anthracene	ND	0.20	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:26	IMR
Dibenzofuran	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:26	IMR
Di-n-butylphthalate	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:26	IMR
1,2-Dichlorobenzene	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:26	IMR
1,3-Dichlorobenzene	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:26	IMR
1,4-Dichlorobenzene	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:26	IMR
3,3-Dichlorobenzidine	ND	0.20	mg/Kg dry	1	MS-09	SW-846 8270D	3/4/19	3/5/19 18:26	IMR
2,4-Dichlorophenol	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:26	IMR
Diethylphthalate	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:26	IMR
2,4-Dimethylphenol	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:26	IMR
Dimethylphthalate	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:26	IMR
2,4-Dinitrophenol	ND	0.77	mg/Kg dry	1	MS-09	SW-846 8270D	3/4/19	3/5/19 18:26	IMR
2,4-Dinitrotoluene	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:26	IMR
2,6-Dinitrotoluene	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:26	IMR
Di-n-octylphthalate	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:26	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.39	mg/Kg dry	1	V-20	SW-846 8270D	3/4/19	3/5/19 18:26	IMR
Fluoranthene	0.80	0.20	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:26	IMR
Fluorene	ND	0.20	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:26	IMR
Hexachlorobenzene	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:26	IMR
Hexachlorobutadiene	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:26	IMR
Hexachloroethane	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:26	IMR
Indeno(1,2,3-cd)pyrene	0.25	0.20	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:26	IMR
Isophorone	ND	0.39	mg/Kg dry	1	V-20	SW-846 8270D	3/4/19	3/5/19 18:26	IMR
2-Methylnaphthalene	ND	0.20	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:26	IMR

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-F4 (0-5)

Sampled: 3/1/2019 13:50

Sample ID: 19C0049-22

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:26	IMR
3/4-Methylphenol	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:26	IMR
Naphthalene	ND	0.20	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:26	IMR
Nitrobenzene	ND	0.39	mg/Kg dry	1	V-20	SW-846 8270D	3/4/19	3/5/19 18:26	IMR
2-Nitrophenol	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:26	IMR
4-Nitrophenol	ND	0.77	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:26	IMR
Pentachlorophenol	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:26	IMR
Phenanthrene	0.62	0.20	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:26	IMR
Phenol	ND	0.39	mg/Kg dry	1	V-20	SW-846 8270D	3/4/19	3/5/19 18:26	IMR
Pyrene	1.1	0.20	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:26	IMR
1,2,4-Trichlorobenzene	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:26	IMR
2,4,5-Trichlorophenol	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:26	IMR
2,4,6-Trichlorophenol	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:26	IMR
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2-Fluorophenol		66.8	30-130					3/5/19 18:26	
Phenol-d6		71.5	30-130					3/5/19 18:26	
Nitrobenzene-d5		74.7	30-130					3/5/19 18:26	
2-Fluorobiphenyl		66.4	30-130					3/5/19 18:26	
2,4,6-Tribromophenol		59.3	30-130					3/5/19 18:26	
p-Terphenyl-d14		71.9	30-130					3/5/19 18:26	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-F4 (0-5)

Sampled: 3/1/2019 13:50

Sample ID: 19C0049-22

Sample Matrix: Soil

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.088	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 18:12	JMB
Aroclor-1221 [1]	ND	0.088	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 18:12	JMB
Aroclor-1232 [1]	ND	0.088	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 18:12	JMB
Aroclor-1242 [1]	ND	0.088	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 18:12	JMB
Aroclor-1248 [1]	ND	0.088	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 18:12	JMB
Aroclor-1254 [1]	ND	0.088	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 18:12	JMB
Aroclor-1260 [1]	ND	0.088	mg/Kg dry	4	R-05	SW-846 8082A	3/4/19	3/6/19 18:12	JMB
Aroclor-1262 [1]	ND	0.088	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 18:12	JMB
Aroclor-1268 [1]	ND	0.088	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 18:12	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		72.4	30-150					3/6/19 18:12	
Decachlorobiphenyl [2]		73.1	30-150					3/6/19 18:12	
Tetrachloro-m-xylene [1]		78.9	30-150					3/6/19 18:12	
Tetrachloro-m-xylene [2]		78.6	30-150					3/6/19 18:12	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-F4 (0-5)

Sampled: 3/1/2019 13:50

Sample ID: 19C0049-22

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	390	97	mg/Kg dry	10		SW-846 8100 Modified	3/4/19	3/6/19 19:39	RMW
<b>Surrogates</b>		<b>% Recovery</b>	<b>Recovery Limits</b>		<b>Flag/Qual</b>				
2-Fluorobiphenyl		56.6	40-140					3/6/19 19:39	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-F4 (0-5)

Sampled: 3/1/2019 13:50

Sample ID: 19C0049-22

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	2.0	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 14:18	QNW
Arsenic	7.0	2.0	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 14:18	QNW
Barium	31	2.0	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 14:18	QNW
Beryllium	0.37	0.20	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 14:18	QNW
Cadmium	0.44	0.20	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 14:18	QNW
Chromium	16	0.39	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 14:18	QNW
Lead	34	0.59	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 14:18	QNW
Mercury	ND	0.029	mg/Kg dry	1		SW-846 7471B	3/4/19	3/6/19 11:58	TBC
Nickel	12	0.39	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 14:18	QNW
Selenium	ND	3.9	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 14:18	QNW
Silver	ND	0.39	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 14:18	QNW
Thallium	ND	2.0	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 14:18	QNW
Vanadium	21	0.79	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 14:18	QNW
Zinc	38	0.79	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 14:18	QNW

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-F4 (0-5)

Sampled: 3/1/2019 13:50

Sample ID: 19C0049-22

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	85.4		% Wt	1		SM 2540G	3/2/19	3/3/19 14:16	VLH
Ignitability	Absent		present/absent	1		SW-846 1030	3/5/19	3/5/19 17:00	DJM
pH @18.7°C	7.7		pH Units	1		SW-846 9045C	3/1/19	3/1/19 21:58	AIA
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	3/5/19	3/6/19 13:45	DJM
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	3/5/19	3/6/19 13:00	DJM
Specific conductance	11	2.0	µmhos/cm	1	R-02	SM21-22 2510B Modified	3/8/19	3/8/19 11:50	EC

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-F4 (5-10)

Sampled: 3/1/2019 13:55

Sample ID: 19C0049-23

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.12	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:41	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:41	MFF
Benzene	ND	0.0025	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:41	MFF
Bromobenzene	ND	0.0025	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:41	MFF
Bromochloromethane	ND	0.0025	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:41	MFF
Bromodichloromethane	ND	0.0025	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:41	MFF
Bromoform	ND	0.0025	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:41	MFF
Bromomethane	ND	0.012	mg/Kg dry	1	V-34	SW-846 8260C	3/5/19	3/5/19 11:41	MFF
2-Butanone (MEK)	ND	0.049	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:41	MFF
n-Butylbenzene	ND	0.0025	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:41	MFF
sec-Butylbenzene	ND	0.0025	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:41	MFF
tert-Butylbenzene	ND	0.0025	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:41	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:41	MFF
Carbon Disulfide	ND	0.0074	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:41	MFF
Carbon Tetrachloride	ND	0.0025	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:41	MFF
Chlorobenzene	ND	0.0025	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:41	MFF
Chlorodibromomethane	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:41	MFF
Chloroethane	ND	0.012	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:41	MFF
Chloroform	ND	0.0049	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:41	MFF
Chloromethane	ND	0.012	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:41	MFF
2-Chlorotoluene	ND	0.0025	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:41	MFF
4-Chlorotoluene	ND	0.0025	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:41	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0049	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:41	MFF
1,2-Dibromoethane (EDB)	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:41	MFF
Dibromomethane	ND	0.0025	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:41	MFF
1,2-Dichlorobenzene	ND	0.0025	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:41	MFF
1,3-Dichlorobenzene	ND	0.0025	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:41	MFF
1,4-Dichlorobenzene	ND	0.0025	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:41	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.012	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:41	MFF
1,1-Dichloroethane	ND	0.0025	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:41	MFF
1,2-Dichloroethane	ND	0.0025	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:41	MFF
1,1-Dichloroethylene	ND	0.0049	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:41	MFF
cis-1,2-Dichloroethylene	ND	0.0025	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:41	MFF
trans-1,2-Dichloroethylene	ND	0.0025	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:41	MFF
1,2-Dichloropropane	ND	0.0025	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:41	MFF
1,3-Dichloropropane	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:41	MFF
2,2-Dichloropropane	ND	0.0025	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:41	MFF
1,1-Dichloropropene	ND	0.0049	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:41	MFF
cis-1,3-Dichloropropene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:41	MFF
trans-1,3-Dichloropropene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:41	MFF
Diethyl Ether	ND	0.012	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:41	MFF
Diisopropyl Ether (DIPE)	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:41	MFF
1,4-Dioxane	ND	0.25	mg/Kg dry	1	V-16	SW-846 8260C	3/5/19	3/5/19 11:41	MFF
Ethylbenzene	ND	0.0025	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:41	MFF



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-F4 (5-10)

Sampled: 3/1/2019 13:55

Sample ID: 19C0049-23

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0025	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:41	MFF
2-Hexanone (MBK)	ND	0.025	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:41	MFF
Isopropylbenzene (Cumene)	ND	0.0025	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:41	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0025	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:41	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0049	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:41	MFF
Methylene Chloride	ND	0.012	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:41	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.025	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:41	MFF
Naphthalene	ND	0.0049	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:41	MFF
n-Propylbenzene	ND	0.0025	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:41	MFF
Styrene	ND	0.0025	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:41	MFF
1,1,1,2-Tetrachloroethane	ND	0.0025	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:41	MFF
1,1,2,2-Tetrachloroethane	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:41	MFF
Tetrachloroethylene	ND	0.0025	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:41	MFF
Tetrahydrofuran	ND	0.012	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:41	MFF
Toluene	0.0049	0.0025	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:41	MFF
1,2,3-Trichlorobenzene	ND	0.0049	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:41	MFF
1,2,4-Trichlorobenzene	ND	0.0025	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:41	MFF
1,1,1-Trichloroethane	ND	0.0025	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:41	MFF
1,1,2-Trichloroethane	ND	0.0025	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:41	MFF
Trichloroethylene	ND	0.0025	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:41	MFF
Trichlorofluoromethane (Freon 11)	ND	0.012	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:41	MFF
1,2,3-Trichloropropane	ND	0.0025	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:41	MFF
1,2,4-Trimethylbenzene	ND	0.0025	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:41	MFF
1,3,5-Trimethylbenzene	ND	0.0025	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:41	MFF
Vinyl Chloride	ND	0.012	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:41	MFF
m+p Xylene	ND	0.0049	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:41	MFF
o-Xylene	ND	0.0025	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 11:41	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	99.9	70-130	3/5/19 11:41
Toluene-d8	99.2	70-130	3/5/19 11:41
4-Bromofluorobenzene	98.8	70-130	3/5/19 11:41

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-F4 (5-10)

Sampled: 3/1/2019 13:55

Sample ID: 19C0049-23

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.19	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:50	IMR
Acenaphthylene	ND	0.19	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:50	IMR
Acetophenone	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:50	IMR
Aniline	ND	0.38	mg/Kg dry	1	V-34	SW-846 8270D	3/4/19	3/5/19 18:50	IMR
Anthracene	ND	0.19	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:50	IMR
Benzo(a)anthracene	0.39	0.19	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:50	IMR
Benzo(a)pyrene	0.42	0.19	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:50	IMR
Benzo(b)fluoranthene	0.45	0.19	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:50	IMR
Benzo(g,h,i)perylene	0.22	0.19	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:50	IMR
Benzo(k)fluoranthene	ND	0.19	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:50	IMR
Bis(2-chloroethoxy)methane	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:50	IMR
Bis(2-chloroethyl)ether	ND	0.38	mg/Kg dry	1	V-20	SW-846 8270D	3/4/19	3/5/19 18:50	IMR
Bis(2-chloroisopropyl)ether	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:50	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:50	IMR
4-Bromophenylphenylether	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:50	IMR
Butylbenzylphthalate	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:50	IMR
4-Chloroaniline	ND	0.74	mg/Kg dry	1	V-34	SW-846 8270D	3/4/19	3/5/19 18:50	IMR
2-Chloronaphthalene	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:50	IMR
2-Chlorophenol	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:50	IMR
Chrysene	0.44	0.19	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:50	IMR
Dibenz(a,h)anthracene	ND	0.19	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:50	IMR
Dibenzofuran	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:50	IMR
Di-n-butylphthalate	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:50	IMR
1,2-Dichlorobenzene	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:50	IMR
1,3-Dichlorobenzene	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:50	IMR
1,4-Dichlorobenzene	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:50	IMR
3,3-Dichlorobenzidine	ND	0.19	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:50	IMR
2,4-Dichlorophenol	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:50	IMR
Diethylphthalate	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:50	IMR
2,4-Dimethylphenol	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:50	IMR
Dimethylphthalate	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:50	IMR
2,4-Dinitrophenol	ND	0.74	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:50	IMR
2,4-Dinitrotoluene	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:50	IMR
2,6-Dinitrotoluene	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:50	IMR
Di-n-octylphthalate	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:50	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.38	mg/Kg dry	1	V-20	SW-846 8270D	3/4/19	3/5/19 18:50	IMR
Fluoranthene	0.54	0.19	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:50	IMR
Fluorene	ND	0.19	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:50	IMR
Hexachlorobenzene	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:50	IMR
Hexachlorobutadiene	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:50	IMR
Hexachloroethane	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:50	IMR
Indeno(1,2,3-cd)pyrene	0.23	0.19	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:50	IMR
Isophorone	ND	0.38	mg/Kg dry	1	V-20	SW-846 8270D	3/4/19	3/5/19 18:50	IMR
2-Methylnaphthalene	ND	0.19	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:50	IMR

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-F4 (5-10)

Sampled: 3/1/2019 13:55

Sample ID: 19C0049-23

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:50	IMR
3/4-Methylphenol	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:50	IMR
Naphthalene	ND	0.19	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:50	IMR
Nitrobenzene	ND	0.38	mg/Kg dry	1	V-20	SW-846 8270D	3/4/19	3/5/19 18:50	IMR
2-Nitrophenol	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:50	IMR
4-Nitrophenol	ND	0.74	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:50	IMR
Pentachlorophenol	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:50	IMR
Phenanthrene	0.31	0.19	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:50	IMR
Phenol	ND	0.38	mg/Kg dry	1	V-20	SW-846 8270D	3/4/19	3/5/19 18:50	IMR
Pyrene	0.82	0.19	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:50	IMR
1,2,4-Trichlorobenzene	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:50	IMR
2,4,5-Trichlorophenol	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:50	IMR
2,4,6-Trichlorophenol	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/5/19 18:50	IMR
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2-Fluorophenol		55.2	30-130					3/5/19 18:50	
Phenol-d6		59.2	30-130					3/5/19 18:50	
Nitrobenzene-d5		60.3	30-130					3/5/19 18:50	
2-Fluorobiphenyl		56.2	30-130					3/5/19 18:50	
2,4,6-Tribromophenol		51.0	30-130					3/5/19 18:50	
p-Terphenyl-d14		58.9	30-130					3/5/19 18:50	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-F4 (5-10)

Sampled: 3/1/2019 13:55

Sample ID: 19C0049-23

Sample Matrix: Soil

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 18:29	JMB
Aroclor-1221 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 18:29	JMB
Aroclor-1232 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 18:29	JMB
Aroclor-1242 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 18:29	JMB
Aroclor-1248 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 18:29	JMB
Aroclor-1254 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 18:29	JMB
Aroclor-1260 [1]	ND	0.086	mg/Kg dry	4	R-05	SW-846 8082A	3/4/19	3/6/19 18:29	JMB
Aroclor-1262 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 18:29	JMB
Aroclor-1268 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 18:29	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		76.3	30-150					3/6/19 18:29	
Decachlorobiphenyl [2]		77.0	30-150					3/6/19 18:29	
Tetrachloro-m-xylene [1]		89.3	30-150					3/6/19 18:29	
Tetrachloro-m-xylene [2]		88.1	30-150					3/6/19 18:29	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-F4 (5-10)

Sampled: 3/1/2019 13:55

Sample ID: 19C0049-23

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	310	93	mg/Kg dry	10		SW-846 8100 Modified	3/4/19	3/6/19 19:59	RMW
<b>Surrogates</b>		<b>% Recovery</b>	<b>Recovery Limits</b>		<b>Flag/Qual</b>				
2-Fluorobiphenyl		44.6	40-140					3/6/19 19:59	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-F4 (5-10)

Sampled: 3/1/2019 13:55

Sample ID: 19C0049-23

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.8	mg/Kg dry	1	MS-07	SW-846 6010D	3/4/19	3/6/19 11:29	QNW
Arsenic	5.8	1.8	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 11:29	QNW
Barium	28	1.8	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 11:29	QNW
Beryllium	0.37	0.18	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 11:29	QNW
Cadmium	0.39	0.18	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 11:29	QNW
Chromium	16	0.37	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 11:29	QNW
Lead	32	0.55	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 11:29	QNW
Mercury	0.028	0.027	mg/Kg dry	1		SW-846 7471B	3/4/19	3/6/19 12:00	TBC
Nickel	11	0.37	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 11:29	QNW
Selenium	ND	3.7	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 11:29	QNW
Silver	ND	0.37	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 11:29	QNW
Thallium	ND	1.8	mg/Kg dry	1	MS-14	SW-846 6010D	3/4/19	3/6/19 11:29	QNW
Vanadium	19	0.74	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 11:29	QNW
Zinc	38	0.74	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 11:29	QNW

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-F4 (5-10)

Sampled: 3/1/2019 13:55

Sample ID: 19C0049-23

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	88.7		% Wt	1		SM 2540G	3/2/19	3/3/19 14:16	VLH
Ignitability	Absent		present/absent	1		SW-846 1030	3/5/19	3/5/19 17:00	DJM
pH @18.8°C	7.6		pH Units	1		SW-846 9045C	3/1/19	3/1/19 21:58	AIA
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	3/5/19	3/6/19 13:45	DJM
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	3/5/19	3/6/19 13:00	DJM
Specific conductance	16	2.0	µmhos/cm	1		SM21-22 2510B Modified	3/5/19	3/5/19 14:00	EC

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-E4 (0-5)

Sampled: 3/1/2019 14:20

Sample ID: 19C0049-24

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.10	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:08	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.0010	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:08	MFF
Benzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:08	MFF
Bromobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:08	MFF
Bromochloromethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:08	MFF
Bromodichloromethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:08	MFF
Bromoform	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:08	MFF
Bromomethane	ND	0.010	mg/Kg dry	1	V-34	SW-846 8260C	3/5/19	3/5/19 12:08	MFF
2-Butanone (MEK)	ND	0.040	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:08	MFF
n-Butylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:08	MFF
sec-Butylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:08	MFF
tert-Butylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:08	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.0010	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:08	MFF
Carbon Disulfide	ND	0.0061	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:08	MFF
Carbon Tetrachloride	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:08	MFF
Chlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:08	MFF
Chlorodibromomethane	ND	0.0010	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:08	MFF
Chloroethane	ND	0.010	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:08	MFF
Chloroform	ND	0.0040	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:08	MFF
Chloromethane	ND	0.010	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:08	MFF
2-Chlorotoluene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:08	MFF
4-Chlorotoluene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:08	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0040	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:08	MFF
1,2-Dibromoethane (EDB)	ND	0.0010	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:08	MFF
Dibromomethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:08	MFF
1,2-Dichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:08	MFF
1,3-Dichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:08	MFF
1,4-Dichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:08	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.010	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:08	MFF
1,1-Dichloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:08	MFF
1,2-Dichloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:08	MFF
1,1-Dichloroethylene	ND	0.0040	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:08	MFF
cis-1,2-Dichloroethylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:08	MFF
trans-1,2-Dichloroethylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:08	MFF
1,2-Dichloropropane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:08	MFF
1,3-Dichloropropane	ND	0.0010	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:08	MFF
2,2-Dichloropropane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:08	MFF
1,1-Dichloropropene	ND	0.0040	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:08	MFF
cis-1,3-Dichloropropene	ND	0.0010	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:08	MFF
trans-1,3-Dichloropropene	ND	0.0010	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:08	MFF
Diethyl Ether	ND	0.010	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:08	MFF
Diisopropyl Ether (DIPE)	ND	0.0010	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:08	MFF
1,4-Dioxane	ND	0.20	mg/Kg dry	1	V-16	SW-846 8260C	3/5/19	3/5/19 12:08	MFF
Ethylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:08	MFF



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-E4 (0-5)

Sampled: 3/1/2019 14:20

Sample ID: 19C0049-24

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:08	MFF
2-Hexanone (MBK)	ND	0.020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:08	MFF
Isopropylbenzene (Cumene)	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:08	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:08	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0040	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:08	MFF
Methylene Chloride	ND	0.010	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:08	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:08	MFF
Naphthalene	ND	0.0040	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:08	MFF
n-Propylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:08	MFF
Styrene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:08	MFF
1,1,1,2-Tetrachloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:08	MFF
1,1,2,2-Tetrachloroethane	ND	0.0010	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:08	MFF
Tetrachloroethylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:08	MFF
Tetrahydrofuran	ND	0.010	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:08	MFF
Toluene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:08	MFF
1,2,3-Trichlorobenzene	ND	0.0040	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:08	MFF
1,2,4-Trichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:08	MFF
1,1,1-Trichloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:08	MFF
1,1,2-Trichloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:08	MFF
Trichloroethylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:08	MFF
Trichlorofluoromethane (Freon 11)	ND	0.010	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:08	MFF
1,2,3-Trichloropropane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:08	MFF
1,2,4-Trimethylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:08	MFF
1,3,5-Trimethylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:08	MFF
Vinyl Chloride	ND	0.010	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:08	MFF
m+p Xylene	ND	0.0040	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:08	MFF
o-Xylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:08	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	96.7	70-130	3/5/19 12:08
Toluene-d8	99.5	70-130	3/5/19 12:08
4-Bromofluorobenzene	99.3	70-130	3/5/19 12:08

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-E4 (0-5)

Sampled: 3/1/2019 14:20

Sample ID: 19C0049-24

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.19	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 18:08	IMR
Acenaphthylene	ND	0.19	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 18:08	IMR
Acetophenone	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 18:08	IMR
Aniline	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 18:08	IMR
Anthracene	0.55	0.19	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 18:08	IMR
Benzo(a)anthracene	1.7	0.19	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 18:08	IMR
Benzo(a)pyrene	1.6	0.19	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 18:08	IMR
Benzo(b)fluoranthene	1.9	0.19	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 18:08	IMR
Benzo(g,h,i)perylene	0.71	0.19	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 18:08	IMR
Benzo(k)fluoranthene	0.72	0.19	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 18:08	IMR
Bis(2-chloroethoxy)methane	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 18:08	IMR
Bis(2-chloroethyl)ether	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 18:08	IMR
Bis(2-chloroisopropyl)ether	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 18:08	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 18:08	IMR
4-Bromophenylphenylether	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 18:08	IMR
Butylbenzylphthalate	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 18:08	IMR
4-Chloroaniline	ND	0.73	mg/Kg dry	1	V-34	SW-846 8270D	3/4/19	3/6/19 18:08	IMR
2-Chloronaphthalene	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 18:08	IMR
2-Chlorophenol	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 18:08	IMR
Chrysene	1.5	0.19	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 18:08	IMR
Dibenz(a,h)anthracene	ND	0.19	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 18:08	IMR
Dibenzofuran	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 18:08	IMR
Di-n-butylphthalate	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 18:08	IMR
1,2-Dichlorobenzene	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 18:08	IMR
1,3-Dichlorobenzene	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 18:08	IMR
1,4-Dichlorobenzene	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 18:08	IMR
3,3-Dichlorobenzidine	ND	0.19	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 18:08	IMR
2,4-Dichlorophenol	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 18:08	IMR
Diethylphthalate	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 18:08	IMR
2,4-Dimethylphenol	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 18:08	IMR
Dimethylphthalate	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 18:08	IMR
2,4-Dinitrophenol	ND	0.73	mg/Kg dry	1	V-05	SW-846 8270D	3/4/19	3/6/19 18:08	IMR
2,4-Dinitrotoluene	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 18:08	IMR
2,6-Dinitrotoluene	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 18:08	IMR
Di-n-octylphthalate	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 18:08	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 18:08	IMR
Fluoranthene	3.0	0.19	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 18:08	IMR
Fluorene	0.21	0.19	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 18:08	IMR
Hexachlorobenzene	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 18:08	IMR
Hexachlorobutadiene	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 18:08	IMR
Hexachloroethane	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 18:08	IMR
Indeno(1,2,3-cd)pyrene	0.87	0.19	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 18:08	IMR
Isophorone	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 18:08	IMR
2-Methylnaphthalene	ND	0.19	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 18:08	IMR

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-E4 (0-5)

Sampled: 3/1/2019 14:20

Sample ID: 19C0049-24

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 18:08	IMR
3/4-Methylphenol	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 18:08	IMR
Naphthalene	ND	0.19	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 18:08	IMR
Nitrobenzene	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 18:08	IMR
2-Nitrophenol	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 18:08	IMR
4-Nitrophenol	ND	0.73	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 18:08	IMR
Pentachlorophenol	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 18:08	IMR
Phenanthrene	2.0	0.19	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 18:08	IMR
Phenol	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 18:08	IMR
Pyrene	3.4	0.19	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 18:08	IMR
1,2,4-Trichlorobenzene	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 18:08	IMR
2,4,5-Trichlorophenol	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 18:08	IMR
2,4,6-Trichlorophenol	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 18:08	IMR
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2-Fluorophenol		50.9	30-130					3/6/19 18:08	
Phenol-d6		56.4	30-130					3/6/19 18:08	
Nitrobenzene-d5		56.2	30-130					3/6/19 18:08	
2-Fluorobiphenyl		51.9	30-130					3/6/19 18:08	
2,4,6-Tribromophenol		54.2	30-130					3/6/19 18:08	
p-Terphenyl-d14		73.4	30-130					3/6/19 18:08	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-E4 (0-5)

Sampled: 3/1/2019 14:20

Sample ID: 19C0049-24

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 18:47	JMB
Aroclor-1221 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 18:47	JMB
Aroclor-1232 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 18:47	JMB
Aroclor-1242 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 18:47	JMB
Aroclor-1248 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 18:47	JMB
Aroclor-1254 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 18:47	JMB
Aroclor-1260 [1]	ND	0.083	mg/Kg dry	4	R-05	SW-846 8082A	3/4/19	3/6/19 18:47	JMB
Aroclor-1262 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 18:47	JMB
Aroclor-1268 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 18:47	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		70.5	30-150					3/6/19 18:47	
Decachlorobiphenyl [2]		73.1	30-150					3/6/19 18:47	
Tetrachloro-m-xylene [1]		86.2	30-150					3/6/19 18:47	
Tetrachloro-m-xylene [2]		83.6	30-150					3/6/19 18:47	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-E4 (0-5)

Sampled: 3/1/2019 14:20

Sample ID: 19C0049-24

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	430	92	mg/Kg dry	10		SW-846 8100 Modified	3/4/19	3/6/19 20:19	RMW
<b>Surrogates</b>		<b>% Recovery</b>	<b>Recovery Limits</b>		<b>Flag/Qual</b>				
2-Fluorobiphenyl		56.4	40-140					3/6/19 20:19	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-E4 (0-5)

Sampled: 3/1/2019 14:20

Sample ID: 19C0049-24

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.9	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 14:37	QNW
Arsenic	3.7	1.9	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 14:37	QNW
Barium	37	1.9	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 14:37	QNW
Beryllium	0.34	0.19	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 14:37	QNW
Cadmium	0.31	0.19	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 14:37	QNW
Chromium	14	0.37	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 14:37	QNW
Lead	74	0.56	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 14:37	QNW
Mercury	0.075	0.026	mg/Kg dry	1		SW-846 7471B	3/4/19	3/6/19 12:01	TBC
Nickel	12	0.37	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 14:37	QNW
Selenium	ND	3.7	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 14:37	QNW
Silver	ND	0.37	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 14:37	QNW
Thallium	ND	1.9	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 14:37	QNW
Vanadium	27	0.74	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 14:37	QNW
Zinc	50	0.74	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 14:37	QNW

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-E4 (0-5)

Sampled: 3/1/2019 14:20

Sample ID: 19C0049-24

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	89.1		% Wt	1		SM 2540G	3/2/19	3/3/19 14:16	VLH
Ignitability	Absent		present/absent	1		SW-846 1030	3/5/19	3/5/19 17:00	DJM
pH @19.5°C	8.5		pH Units	1		SW-846 9045C	3/1/19	3/1/19 22:20	AIA
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	3/5/19	3/6/19 13:45	DJM
Reactive Sulfide	ND	19	mg/Kg	1		SW-846 9030A	3/5/19	3/6/19 13:00	DJM
Specific conductance	10	2.0	µmhos/cm	1		SM21-22 2510B Modified	3/5/19	3/5/19 14:00	EC

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-E4 (5-10)

Sampled: 3/1/2019 14:30

Sample ID: 19C0049-25

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.10	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:35	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.0010	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:35	MFF
Benzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:35	MFF
Bromobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:35	MFF
Bromochloromethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:35	MFF
Bromodichloromethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:35	MFF
Bromoform	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:35	MFF
Bromomethane	ND	0.010	mg/Kg dry	1	V-34	SW-846 8260C	3/5/19	3/5/19 12:35	MFF
2-Butanone (MEK)	ND	0.041	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:35	MFF
n-Butylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:35	MFF
sec-Butylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:35	MFF
tert-Butylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:35	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.0010	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:35	MFF
Carbon Disulfide	ND	0.0061	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:35	MFF
Carbon Tetrachloride	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:35	MFF
Chlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:35	MFF
Chlorodibromomethane	ND	0.0010	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:35	MFF
Chloroethane	ND	0.010	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:35	MFF
Chloroform	ND	0.0041	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:35	MFF
Chloromethane	ND	0.010	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:35	MFF
2-Chlorotoluene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:35	MFF
4-Chlorotoluene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:35	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0041	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:35	MFF
1,2-Dibromoethane (EDB)	ND	0.0010	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:35	MFF
Dibromomethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:35	MFF
1,2-Dichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:35	MFF
1,3-Dichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:35	MFF
1,4-Dichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:35	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.010	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:35	MFF
1,1-Dichloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:35	MFF
1,2-Dichloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:35	MFF
1,1-Dichloroethylene	ND	0.0041	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:35	MFF
cis-1,2-Dichloroethylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:35	MFF
trans-1,2-Dichloroethylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:35	MFF
1,2-Dichloropropane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:35	MFF
1,3-Dichloropropane	ND	0.0010	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:35	MFF
2,2-Dichloropropane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:35	MFF
1,1-Dichloropropene	ND	0.0041	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:35	MFF
cis-1,3-Dichloropropene	ND	0.0010	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:35	MFF
trans-1,3-Dichloropropene	ND	0.0010	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:35	MFF
Diethyl Ether	ND	0.010	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:35	MFF
Diisopropyl Ether (DIPE)	ND	0.0010	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:35	MFF
1,4-Dioxane	ND	0.20	mg/Kg dry	1	V-16	SW-846 8260C	3/5/19	3/5/19 12:35	MFF
Ethylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:35	MFF



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-E4 (5-10)

Sampled: 3/1/2019 14:30

Sample ID: 19C0049-25

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:35	MFF
2-Hexanone (MBK)	ND	0.020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:35	MFF
Isopropylbenzene (Cumene)	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:35	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:35	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0041	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:35	MFF
Methylene Chloride	ND	0.010	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:35	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:35	MFF
Naphthalene	ND	0.0041	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:35	MFF
n-Propylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:35	MFF
Styrene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:35	MFF
1,1,1,2-Tetrachloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:35	MFF
1,1,2,2-Tetrachloroethane	ND	0.0010	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:35	MFF
Tetrachloroethylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:35	MFF
Tetrahydrofuran	ND	0.010	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:35	MFF
Toluene	0.0052	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:35	MFF
1,2,3-Trichlorobenzene	ND	0.0041	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:35	MFF
1,2,4-Trichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:35	MFF
1,1,1-Trichloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:35	MFF
1,1,2-Trichloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:35	MFF
Trichloroethylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:35	MFF
Trichlorofluoromethane (Freon 11)	ND	0.010	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:35	MFF
1,2,3-Trichloropropane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:35	MFF
1,2,4-Trimethylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:35	MFF
1,3,5-Trimethylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:35	MFF
Vinyl Chloride	ND	0.010	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:35	MFF
m+p Xylene	ND	0.0041	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:35	MFF
o-Xylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/5/19	3/5/19 12:35	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	96.5	70-130	3/5/19 12:35
Toluene-d8	98.5	70-130	3/5/19 12:35
4-Bromofluorobenzene	100	70-130	3/5/19 12:35

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-E4 (5-10)

Sampled: 3/1/2019 14:30

Sample ID: 19C0049-25

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.19	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 14:17	IMR
Acenaphthylene	ND	0.19	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 14:17	IMR
Acetophenone	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 14:17	IMR
Aniline	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 14:17	IMR
Anthracene	ND	0.19	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 14:17	IMR
Benzo(a)anthracene	0.45	0.19	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 14:17	IMR
Benzo(a)pyrene	0.49	0.19	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 14:17	IMR
Benzo(b)fluoranthene	0.57	0.19	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 14:17	IMR
Benzo(g,h,i)perylene	0.37	0.19	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 14:17	IMR
Benzo(k)fluoranthene	0.21	0.19	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 14:17	IMR
Bis(2-chloroethoxy)methane	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 14:17	IMR
Bis(2-chloroethyl)ether	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 14:17	IMR
Bis(2-chloroisopropyl)ether	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 14:17	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 14:17	IMR
4-Bromophenylphenylether	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 14:17	IMR
Butylbenzylphthalate	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 14:17	IMR
4-Chloroaniline	ND	0.76	mg/Kg dry	1	V-34	SW-846 8270D	3/4/19	3/6/19 14:17	IMR
2-Chloronaphthalene	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 14:17	IMR
2-Chlorophenol	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 14:17	IMR
Chrysene	0.46	0.19	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 14:17	IMR
Dibenz(a,h)anthracene	ND	0.19	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 14:17	IMR
Dibenzofuran	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 14:17	IMR
Di-n-butylphthalate	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 14:17	IMR
1,2-Dichlorobenzene	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 14:17	IMR
1,3-Dichlorobenzene	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 14:17	IMR
1,4-Dichlorobenzene	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 14:17	IMR
3,3-Dichlorobenzidine	ND	0.19	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 14:17	IMR
2,4-Dichlorophenol	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 14:17	IMR
Diethylphthalate	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 14:17	IMR
2,4-Dimethylphenol	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 14:17	IMR
Dimethylphthalate	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 14:17	IMR
2,4-Dinitrophenol	ND	0.76	mg/Kg dry	1	V-05	SW-846 8270D	3/4/19	3/6/19 14:17	IMR
2,4-Dinitrotoluene	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 14:17	IMR
2,6-Dinitrotoluene	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 14:17	IMR
Di-n-octylphthalate	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 14:17	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 14:17	IMR
Fluoranthene	0.84	0.19	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 14:17	IMR
Fluorene	ND	0.19	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 14:17	IMR
Hexachlorobenzene	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 14:17	IMR
Hexachlorobutadiene	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 14:17	IMR
Hexachloroethane	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 14:17	IMR
Indeno(1,2,3-cd)pyrene	0.34	0.19	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 14:17	IMR
Isophorone	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 14:17	IMR
2-Methylnaphthalene	ND	0.19	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 14:17	IMR

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-E4 (5-10)

Sampled: 3/1/2019 14:30

Sample ID: 19C0049-25

Sample Matrix: Soil

Semivolatle Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 14:17	IMR
3/4-Methylphenol	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 14:17	IMR
Naphthalene	ND	0.19	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 14:17	IMR
Nitrobenzene	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 14:17	IMR
2-Nitrophenol	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 14:17	IMR
4-Nitrophenol	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 14:17	IMR
Pentachlorophenol	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 14:17	IMR
Phenanthrene	0.43	0.19	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 14:17	IMR
Phenol	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 14:17	IMR
Pyrene	1.0	0.19	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 14:17	IMR
1,2,4-Trichlorobenzene	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 14:17	IMR
2,4,5-Trichlorophenol	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 14:17	IMR
2,4,6-Trichlorophenol	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/4/19	3/6/19 14:17	IMR
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2-Fluorophenol		59.2	30-130					3/6/19 14:17	
Phenol-d6		62.2	30-130					3/6/19 14:17	
Nitrobenzene-d5		64.2	30-130					3/6/19 14:17	
2-Fluorobiphenyl		56.1	30-130					3/6/19 14:17	
2,4,6-Tribromophenol		57.4	30-130					3/6/19 14:17	
p-Terphenyl-d14		76.8	30-130					3/6/19 14:17	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-E4 (5-10)

Sampled: 3/1/2019 14:30

Sample ID: 19C0049-25

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.088	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 19:05	JMB
Aroclor-1221 [1]	ND	0.088	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 19:05	JMB
Aroclor-1232 [1]	ND	0.088	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 19:05	JMB
Aroclor-1242 [1]	ND	0.088	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 19:05	JMB
Aroclor-1248 [1]	ND	0.088	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 19:05	JMB
Aroclor-1254 [1]	ND	0.088	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 19:05	JMB
Aroclor-1260 [1]	ND	0.088	mg/Kg dry	4	R-05	SW-846 8082A	3/4/19	3/6/19 19:05	JMB
Aroclor-1262 [1]	ND	0.088	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 19:05	JMB
Aroclor-1268 [1]	ND	0.088	mg/Kg dry	4		SW-846 8082A	3/4/19	3/6/19 19:05	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		70.8	30-150					3/6/19 19:05	
Decachlorobiphenyl [2]		73.0	30-150					3/6/19 19:05	
Tetrachloro-m-xylene [1]		88.5	30-150					3/6/19 19:05	
Tetrachloro-m-xylene [2]		87.2	30-150					3/6/19 19:05	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-E4 (5-10)

Sampled: 3/1/2019 14:30

Sample ID: 19C0049-25

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	680	190	mg/Kg dry	20		SW-846 8100 Modified	3/4/19	3/6/19 20:40	RMW
<b>Surrogates</b>		<b>% Recovery</b>	<b>Recovery Limits</b>		<b>Flag/Qual</b>				
2-Fluorobiphenyl		54.3	40-140					3/6/19 20:40	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-E4 (5-10)

Sampled: 3/1/2019 14:30

Sample ID: 19C0049-25

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.9	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 14:42	QNW
Arsenic	4.9	1.9	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 14:42	QNW
Barium	34	1.9	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 14:42	QNW
Beryllium	0.34	0.19	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 14:42	QNW
Cadmium	0.36	0.19	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 14:42	QNW
Chromium	16	0.37	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 14:42	QNW
Lead	23	0.56	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 14:42	QNW
Mercury	ND	0.028	mg/Kg dry	1		SW-846 7471B	3/4/19	3/6/19 12:07	TBC
Nickel	13	0.37	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 14:42	QNW
Selenium	ND	3.7	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 14:42	QNW
Silver	ND	0.37	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 14:42	QNW
Thallium	ND	1.9	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 14:42	QNW
Vanadium	25	0.75	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 14:42	QNW
Zinc	36	0.75	mg/Kg dry	1		SW-846 6010D	3/4/19	3/6/19 14:42	QNW

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0049

Date Received: 3/1/2019

Field Sample #: TP-E4 (5-10)

Sampled: 3/1/2019 14:30

Sample ID: 19C0049-25

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	87.0		% Wt	1		SM 2540G	3/2/19	3/3/19 14:16	VLH
Ignitability	Absent		present/absent	1		SW-846 1030	3/5/19	3/5/19 17:00	DJM
pH @19.5°C	7.9		pH Units	1		SW-846 9045C	3/1/19	3/1/19 22:20	AIA
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	3/5/19	3/6/19 13:45	DJM
Reactive Sulfide	ND	19	mg/Kg	1		SW-846 9030A	3/5/19	3/6/19 13:00	DJM
Specific conductance	10	2.0	µmhos/cm	1		SM21-22 2510B Modified	3/5/19	3/5/19 14:00	EC

**Sample Extraction Data**

**Prep Method: % Solids-SM 2540G**

Lab Number [Field ID]	Batch	Date
19C0049-01 [TP-F8 (0-5)]	B224810	03/02/19
19C0049-02 [TP-F8 (5-10)]	B224810	03/02/19
19C0049-03 [TP-E8 (0-5)]	B224810	03/02/19
19C0049-04 [TP-E8 (5-10)]	B224810	03/02/19
19C0049-05 [TP-F6 (0-5)]	B224810	03/02/19
19C0049-06 [TP-F6 (5-10)]	B224810	03/02/19
19C0049-07 [TP-G6 (0-5)]	B224810	03/02/19
19C0049-08 [TP-G6 (5-10)]	B224810	03/02/19
19C0049-09 [TP-G7 (0-5)]	B224810	03/02/19
19C0049-10 [TP-G7 (5-10)]	B224810	03/02/19
19C0049-11 [TP-F7 (0-5)]	B224810	03/02/19
19C0049-12 [TP-F7 (5-10)]	B224810	03/02/19
19C0049-13 [TP-E7 (0-5)]	B224810	03/02/19
19C0049-14 [TP-E7 (5-10)]	B224810	03/02/19
19C0049-15 [TP-E6 (0-5)]	B224810	03/02/19
19C0049-16 [TP-E6 (5-10)]	B224810	03/02/19
19C0049-17 [TP-F5 (0-5)]	B224810	03/02/19
19C0049-18 [TP-F5 (5-10)]	B224810	03/02/19
19C0049-19 [TP-E5 (0-5)]	B224810	03/02/19
19C0049-20 [TP-E5 (5-10)]	B224810	03/02/19
19C0049-21 [TP-E5 (10-15)]	B224810	03/02/19
19C0049-22 [TP-F4 (0-5)]	B224810	03/02/19
19C0049-23 [TP-F4 (5-10)]	B224810	03/02/19
19C0049-24 [TP-E4 (0-5)]	B224810	03/02/19
19C0049-25 [TP-E4 (5-10)]	B224810	03/02/19

**SM21-22 2510B Modified**

Lab Number [Field ID]	Batch	Initial [g]	Date
19C0049-23 [TP-F4 (5-10)]	B224951	1.00	03/05/19
19C0049-24 [TP-E4 (0-5)]	B224951	1.00	03/05/19
19C0049-25 [TP-E4 (5-10)]	B224951	1.00	03/05/19

**SM21-22 2510B Modified**

Lab Number [Field ID]	Batch	Initial [g]	Date
19C0049-01 [TP-F8 (0-5)]	B225154	1.00	03/07/19
19C0049-02 [TP-F8 (5-10)]	B225154	1.00	03/07/19
19C0049-03 [TP-E8 (0-5)]	B225154	1.00	03/07/19
19C0049-04 [TP-E8 (5-10)]	B225154	1.00	03/07/19
19C0049-05 [TP-F6 (0-5)]	B225154	1.00	03/07/19
19C0049-06 [TP-F6 (5-10)]	B225154	1.00	03/07/19
19C0049-07 [TP-G6 (0-5)]	B225154	1.00	03/07/19
19C0049-08 [TP-G6 (5-10)]	B225154	1.00	03/07/19
19C0049-09 [TP-G7 (0-5)]	B225154	1.00	03/07/19
19C0049-10 [TP-G7 (5-10)]	B225154	1.00	03/07/19
19C0049-11 [TP-F7 (0-5)]	B225154	1.00	03/07/19
19C0049-12 [TP-F7 (5-10)]	B225154	1.00	03/07/19
19C0049-13 [TP-E7 (0-5)]	B225154	1.00	03/07/19
19C0049-14 [TP-E7 (5-10)]	B225154	1.00	03/07/19



**Sample Extraction Data**

**SM21-22 2510B Modified**

Lab Number [Field ID]	Batch	Initial [g]	Date
19C0049-15 [TP-E6 (0-5)]	B225268	1.00	03/08/19
19C0049-16 [TP-E6 (5-10)]	B225268	1.00	03/08/19
19C0049-17 [TP-F5 (0-5)]	B225268	1.00	03/08/19
19C0049-18 [TP-F5 (5-10)]	B225268	1.00	03/08/19
19C0049-19 [TP-E5 (0-5)]	B225268	1.00	03/08/19
19C0049-20 [TP-E5 (5-10)]	B225268	1.00	03/08/19
19C0049-21 [TP-E5 (10-15)]	B225268	1.00	03/08/19
19C0049-22 [TP-F4 (0-5)]	B225268	1.00	03/08/19

**SW-846 1030**

Lab Number [Field ID]	Batch	Initial [g]	Date
19C0049-01 [TP-F8 (0-5)]	B224819	50.0	03/02/19
19C0049-02 [TP-F8 (5-10)]	B224819	50.0	03/02/19
19C0049-03 [TP-E8 (0-5)]	B224819	50.0	03/02/19
19C0049-04 [TP-E8 (5-10)]	B224819	50.0	03/02/19
19C0049-05 [TP-F6 (0-5)]	B224819	50.0	03/02/19
19C0049-06 [TP-F6 (5-10)]	B224819	50.0	03/02/19
19C0049-07 [TP-G6 (0-5)]	B224819	50.0	03/02/19
19C0049-08 [TP-G6 (5-10)]	B224819	50.0	03/02/19
19C0049-09 [TP-G7 (0-5)]	B224819	50.0	03/02/19

**SW-846 1030**

Lab Number [Field ID]	Batch	Initial [g]	Date
19C0049-10 [TP-G7 (5-10)]	B224978	50.0	03/05/19
19C0049-11 [TP-F7 (0-5)]	B224978	50.0	03/05/19
19C0049-12 [TP-F7 (5-10)]	B224978	50.0	03/05/19
19C0049-13 [TP-E7 (0-5)]	B224978	50.0	03/05/19
19C0049-14 [TP-E7 (5-10)]	B224978	50.0	03/05/19
19C0049-15 [TP-E6 (0-5)]	B224978	50.0	03/05/19
19C0049-16 [TP-E6 (5-10)]	B224978	50.0	03/05/19
19C0049-17 [TP-F5 (0-5)]	B224978	50.0	03/05/19
19C0049-18 [TP-F5 (5-10)]	B224978	50.0	03/05/19
19C0049-19 [TP-E5 (0-5)]	B224978	50.0	03/05/19
19C0049-20 [TP-E5 (5-10)]	B224978	50.0	03/05/19
19C0049-21 [TP-E5 (10-15)]	B224978	50.0	03/05/19
19C0049-22 [TP-F4 (0-5)]	B224978	50.0	03/05/19
19C0049-23 [TP-F4 (5-10)]	B224978	50.0	03/05/19
19C0049-24 [TP-E4 (0-5)]	B224978	50.0	03/05/19
19C0049-25 [TP-E4 (5-10)]	B224978	50.0	03/05/19

**Prep Method: SW-846 3050B-SW-846 6010D**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C0049-01 [TP-F8 (0-5)]	B224886	1.56	50.0	03/04/19
19C0049-02 [TP-F8 (5-10)]	B224886	1.52	50.0	03/04/19
19C0049-03 [TP-E8 (0-5)]	B224886	1.49	50.0	03/04/19
19C0049-04 [TP-E8 (5-10)]	B224886	1.51	50.0	03/04/19
19C0049-05 [TP-F6 (0-5)]	B224886	1.52	50.0	03/04/19
19C0049-06 [TP-F6 (5-10)]	B224886	1.55	50.0	03/04/19

**Sample Extraction Data**

**Prep Method: SW-846 3050B-SW-846 6010D**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C0049-07 [TP-G6 (0-5)]	B224886	1.52	50.0	03/04/19
19C0049-08 [TP-G6 (5-10)]	B224886	1.53	50.0	03/04/19

**Prep Method: SW-846 3050B-SW-846 6010D**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C0049-09 [TP-G7 (0-5)]	B224899	1.52	50.0	03/04/19
19C0049-10 [TP-G7 (5-10)]	B224899	1.51	50.0	03/04/19
19C0049-11 [TP-F7 (0-5)]	B224899	1.54	50.0	03/04/19
19C0049-12 [TP-F7 (5-10)]	B224899	1.54	50.0	03/04/19
19C0049-13 [TP-E7 (0-5)]	B224899	1.49	50.0	03/04/19
19C0049-14 [TP-E7 (5-10)]	B224899	1.53	50.0	03/04/19
19C0049-15 [TP-E6 (0-5)]	B224899	1.49	50.0	03/04/19
19C0049-16 [TP-E6 (5-10)]	B224899	1.48	50.0	03/04/19
19C0049-17 [TP-F5 (0-5)]	B224899	1.51	50.0	03/04/19
19C0049-18 [TP-F5 (5-10)]	B224899	1.53	50.0	03/04/19
19C0049-19 [TP-E5 (0-5)]	B224899	1.54	50.0	03/04/19
19C0049-20 [TP-E5 (5-10)]	B224899	1.52	50.0	03/04/19
19C0049-21 [TP-E5 (10-15)]	B224899	1.50	50.0	03/04/19
19C0049-22 [TP-F4 (0-5)]	B224899	1.49	50.0	03/04/19
19C0049-23 [TP-F4 (5-10)]	B224899	1.53	50.0	03/04/19
19C0049-24 [TP-E4 (0-5)]	B224899	1.51	50.0	03/04/19
19C0049-25 [TP-E4 (5-10)]	B224899	1.54	50.0	03/04/19

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C0049-21 [TP-E5 (10-15)]	B224882	0.613	50.0	03/04/19
19C0049-22 [TP-F4 (0-5)]	B224882	0.616	50.0	03/04/19
19C0049-23 [TP-F4 (5-10)]	B224882	0.618	50.0	03/04/19
19C0049-24 [TP-E4 (0-5)]	B224882	0.645	50.0	03/04/19
19C0049-25 [TP-E4 (5-10)]	B224882	0.613	50.0	03/04/19

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C0049-01 [TP-F8 (0-5)]	B224884	0.586	50.0	03/04/19
19C0049-02 [TP-F8 (5-10)]	B224884	0.608	50.0	03/04/19
19C0049-03 [TP-E8 (0-5)]	B224884	0.630	50.0	03/04/19
19C0049-04 [TP-E8 (5-10)]	B224884	0.588	50.0	03/04/19
19C0049-05 [TP-F6 (0-5)]	B224884	0.573	50.0	03/04/19
19C0049-06 [TP-F6 (5-10)]	B224884	0.573	50.0	03/04/19
19C0049-07 [TP-G6 (0-5)]	B224884	0.620	50.0	03/04/19
19C0049-08 [TP-G6 (5-10)]	B224884	0.644	50.0	03/04/19
19C0049-09 [TP-G7 (0-5)]	B224884	0.604	50.0	03/04/19
19C0049-10 [TP-G7 (5-10)]	B224884	0.614	50.0	03/04/19
19C0049-11 [TP-F7 (0-5)]	B224884	0.607	50.0	03/04/19
19C0049-12 [TP-F7 (5-10)]	B224884	0.611	50.0	03/04/19
19C0049-13 [TP-E7 (0-5)]	B224884	0.634	50.0	03/04/19
19C0049-14 [TP-E7 (5-10)]	B224884	0.622	50.0	03/04/19
19C0049-15 [TP-E6 (0-5)]	B224884	0.580	50.0	03/04/19

**Sample Extraction Data**

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C0049-16 [TP-E6 (5-10)]	B224884	0.630	50.0	03/04/19
19C0049-17 [TP-F5 (0-5)]	B224884	0.628	50.0	03/04/19
19C0049-18 [TP-F5 (5-10)]	B224884	0.622	50.0	03/04/19
19C0049-19 [TP-E5 (0-5)]	B224884	0.642	50.0	03/04/19
19C0049-20 [TP-E5 (5-10)]	B224884	0.646	50.0	03/04/19

**Prep Method: SW-846 3540C-SW-846 8082A**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C0049-21 [TP-E5 (10-15)]	B224905	10.6	10.0	03/04/19
19C0049-22 [TP-F4 (0-5)]	B224905	10.6	10.0	03/04/19
19C0049-23 [TP-F4 (5-10)]	B224905	10.5	10.0	03/04/19
19C0049-24 [TP-E4 (0-5)]	B224905	10.8	10.0	03/04/19
19C0049-25 [TP-E4 (5-10)]	B224905	10.5	10.0	03/04/19

**Prep Method: SW-846 3540C-SW-846 8082A**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C0049-01 [TP-F8 (0-5)]	B224907	10.4	10.0	03/04/19
19C0049-02 [TP-F8 (5-10)]	B224907	10.6	10.0	03/04/19
19C0049-03 [TP-E8 (0-5)]	B224907	10.1	10.0	03/04/19
19C0049-04 [TP-E8 (5-10)]	B224907	10.4	10.0	03/04/19
19C0049-05 [TP-F6 (0-5)]	B224907	10.3	10.0	03/04/19
19C0049-06 [TP-F6 (5-10)]	B224907	10.5	10.0	03/04/19
19C0049-07 [TP-G6 (0-5)]	B224907	10.3	10.0	03/04/19
19C0049-08 [TP-G6 (5-10)]	B224907	10.0	10.0	03/04/19
19C0049-09 [TP-G7 (0-5)]	B224907	10.5	10.0	03/04/19
19C0049-10 [TP-G7 (5-10)]	B224907	10.2	10.0	03/04/19
19C0049-11 [TP-F7 (0-5)]	B224907	10.5	10.0	03/04/19
19C0049-12 [TP-F7 (5-10)]	B224907	10.3	10.0	03/04/19
19C0049-13 [TP-E7 (0-5)]	B224907	10.3	10.0	03/04/19
19C0049-14 [TP-E7 (5-10)]	B224907	10.6	10.0	03/04/19
19C0049-15 [TP-E6 (0-5)]	B224907	10.4	10.0	03/04/19
19C0049-16 [TP-E6 (5-10)]	B224907	10.6	10.0	03/04/19
19C0049-17 [TP-F5 (0-5)]	B224907	10.2	10.0	03/04/19
19C0049-18 [TP-F5 (5-10)]	B224907	10.4	10.0	03/04/19
19C0049-19 [TP-E5 (0-5)]	B224907	10.4	10.0	03/04/19
19C0049-20 [TP-E5 (5-10)]	B224907	10.8	10.0	03/04/19

**Prep Method: SW-846 3546-SW-846 8100 Modified**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C0049-01 [TP-F8 (0-5)]	B224908	30.3	1.00	03/04/19
19C0049-02 [TP-F8 (5-10)]	B224908	30.1	1.00	03/04/19
19C0049-03 [TP-E8 (0-5)]	B224908	30.6	1.00	03/04/19
19C0049-04 [TP-E8 (5-10)]	B224908	30.2	1.00	03/04/19
19C0049-05 [TP-F6 (0-5)]	B224908	30.4	1.00	03/04/19
19C0049-06 [TP-F6 (5-10)]	B224908	30.4	1.00	03/04/19
19C0049-07 [TP-G6 (0-5)]	B224908	30.5	1.00	03/04/19
19C0049-08 [TP-G6 (5-10)]	B224908	30.4	1.00	03/04/19
19C0049-09 [TP-G7 (0-5)]	B224908	30.2	1.00	03/04/19

**Sample Extraction Data**

**Prep Method: SW-846 3546-SW-846 8100 Modified**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C0049-10 [TP-G7 (5-10)]	B224908	30.0	1.00	03/04/19
19C0049-11 [TP-F7 (0-5)]	B224908	30.3	1.00	03/04/19
19C0049-12 [TP-F7 (5-10)]	B224908	30.3	1.00	03/04/19
19C0049-13 [TP-E7 (0-5)]	B224908	30.1	1.00	03/04/19
19C0049-14 [TP-E7 (5-10)]	B224908	30.2	1.00	03/04/19
19C0049-15 [TP-E6 (0-5)]	B224908	30.0	1.00	03/04/19
19C0049-16 [TP-E6 (5-10)]	B224908	30.3	1.00	03/04/19
19C0049-17 [TP-F5 (0-5)]	B224908	30.8	1.00	03/04/19
19C0049-18 [TP-F5 (5-10)]	B224908	30.1	1.00	03/04/19
19C0049-19 [TP-E5 (0-5)]	B224908	30.2	1.00	03/04/19
19C0049-20 [TP-E5 (5-10)]	B224908	30.1	1.00	03/04/19

**Prep Method: SW-846 3546-SW-846 8100 Modified**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C0049-21 [TP-E5 (10-15)]	B224910	30.3	1.00	03/04/19
19C0049-22 [TP-F4 (0-5)]	B224910	30.3	1.00	03/04/19
19C0049-23 [TP-F4 (5-10)]	B224910	30.2	1.00	03/04/19
19C0049-24 [TP-E4 (0-5)]	B224910	30.5	1.00	03/04/19
19C0049-25 [TP-E4 (5-10)]	B224910	30.1	1.00	03/04/19

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C0049-01 [TP-F8 (0-5)]	B224963	4.96	10.0	03/05/19
19C0049-02 [TP-F8 (5-10)]	B224963	6.27	10.0	03/05/19
19C0049-03 [TP-E8 (0-5)]	B224963	6.63	10.0	03/05/19
19C0049-04 [TP-E8 (5-10)]	B224963	4.49	10.0	03/05/19
19C0049-05 [TP-F6 (0-5)]	B224963	6.92	10.0	03/05/19
19C0049-06 [TP-F6 (5-10)]	B224963	4.92	10.0	03/05/19
19C0049-07 [TP-G6 (0-5)]	B224963	4.60	10.0	03/05/19
19C0049-08 [TP-G6 (5-10)]	B224963	5.08	10.0	03/05/19
19C0049-09 [TP-G7 (0-5)]	B224963	5.30	10.0	03/05/19
19C0049-10 [TP-G7 (5-10)]	B224963	5.70	10.0	03/05/19
19C0049-11 [TP-F7 (0-5)]	B224963	5.25	10.0	03/05/19
19C0049-12 [TP-F7 (5-10)]	B224963	7.05	10.0	03/05/19
19C0049-13 [TP-E7 (0-5)]	B224963	5.53	10.0	03/05/19
19C0049-14 [TP-E7 (5-10)]	B224963	5.50	10.0	03/05/19
19C0049-15 [TP-E6 (0-5)]	B224963	5.99	10.0	03/05/19
19C0049-16 [TP-E6 (5-10)]	B224963	5.70	10.0	03/05/19

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C0049-17 [TP-F5 (0-5)]	B224964	5.75	10.0	03/05/19
19C0049-18 [TP-F5 (5-10)]	B224964	6.18	10.0	03/05/19
19C0049-19 [TP-E5 (0-5)]	B224964	6.49	10.0	03/05/19
19C0049-20 [TP-E5 (5-10)]	B224964	4.60	10.0	03/05/19
19C0049-21 [TP-E5 (10-15)]	B224964	6.21	10.0	03/05/19
19C0049-22 [TP-F4 (0-5)]	B224964	7.27	10.0	03/05/19
19C0049-23 [TP-F4 (5-10)]	B224964	4.56	10.0	03/05/19

**Sample Extraction Data**

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C0049-24 [TP-E4 (0-5)]	B224964	5.56	10.0	03/05/19
19C0049-25 [TP-E4 (5-10)]	B224964	5.64	10.0	03/05/19

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C0049-01 [TP-F8 (0-5)]	B224909	30.3	1.00	03/04/19
19C0049-02 [TP-F8 (5-10)]	B224909	30.1	1.00	03/04/19
19C0049-03 [TP-E8 (0-5)]	B224909	30.6	1.00	03/04/19
19C0049-04 [TP-E8 (5-10)]	B224909	30.2	1.00	03/04/19
19C0049-05 [TP-F6 (0-5)]	B224909	30.4	1.00	03/04/19
19C0049-06 [TP-F6 (5-10)]	B224909	30.4	1.00	03/04/19
19C0049-07 [TP-G6 (0-5)]	B224909	30.5	1.00	03/04/19
19C0049-08 [TP-G6 (5-10)]	B224909	30.4	1.00	03/04/19
19C0049-09 [TP-G7 (0-5)]	B224909	30.2	1.00	03/04/19
19C0049-10 [TP-G7 (5-10)]	B224909	30.0	1.00	03/04/19
19C0049-11 [TP-F7 (0-5)]	B224909	30.3	1.00	03/04/19
19C0049-12 [TP-F7 (5-10)]	B224909	30.3	1.00	03/04/19
19C0049-13 [TP-E7 (0-5)]	B224909	30.1	1.00	03/04/19
19C0049-14 [TP-E7 (5-10)]	B224909	30.2	1.00	03/04/19
19C0049-15 [TP-E6 (0-5)]	B224909	30.0	1.00	03/04/19
19C0049-16 [TP-E6 (5-10)]	B224909	30.3	1.00	03/04/19
19C0049-17 [TP-F5 (0-5)]	B224909	30.8	1.00	03/04/19
19C0049-18 [TP-F5 (5-10)]	B224909	30.1	1.00	03/04/19
19C0049-19 [TP-E5 (0-5)]	B224909	30.2	1.00	03/04/19
19C0049-20 [TP-E5 (5-10)]	B224909	30.1	1.00	03/04/19

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C0049-21 [TP-E5 (10-15)]	B224911	30.3	1.00	03/04/19
19C0049-22 [TP-F4 (0-5)]	B224911	30.3	1.00	03/04/19
19C0049-23 [TP-F4 (5-10)]	B224911	30.2	1.00	03/04/19
19C0049-24 [TP-E4 (0-5)]	B224911	30.5	1.00	03/04/19
19C0049-25 [TP-E4 (5-10)]	B224911	30.1	1.00	03/04/19

**SW-846 9014**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C0049-01 [TP-F8 (0-5)]	B224816	25.6	250	03/02/19
19C0049-02 [TP-F8 (5-10)]	B224816	25.7	250	03/02/19
19C0049-03 [TP-E8 (0-5)]	B224816	25.7	250	03/02/19
19C0049-04 [TP-E8 (5-10)]	B224816	25.1	250	03/02/19
19C0049-05 [TP-F6 (0-5)]	B224816	25.2	250	03/02/19
19C0049-06 [TP-F6 (5-10)]	B224816	25.5	250	03/02/19
19C0049-07 [TP-G6 (0-5)]	B224816	25.8	250	03/02/19
19C0049-08 [TP-G6 (5-10)]	B224816	25.2	250	03/02/19
19C0049-09 [TP-G7 (0-5)]	B224816	25.6	250	03/02/19
19C0049-10 [TP-G7 (5-10)]	B224816	25.7	250	03/02/19
19C0049-11 [TP-F7 (0-5)]	B224816	25.4	250	03/02/19
19C0049-12 [TP-F7 (5-10)]	B224816	25.1	250	03/02/19

**Sample Extraction Data**

**SW-846 9014**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C0049-13 [TP-E7 (0-5)]	B224816	25.1	250	03/02/19
19C0049-14 [TP-E7 (5-10)]	B224816	25.5	250	03/02/19

**SW-846 9014**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C0049-15 [TP-E6 (0-5)]	B225002	25.9	250	03/05/19
19C0049-16 [TP-E6 (5-10)]	B225002	25.5	250	03/05/19
19C0049-17 [TP-F5 (0-5)]	B225002	25.6	250	03/05/19
19C0049-18 [TP-F5 (5-10)]	B225002	25.3	250	03/05/19
19C0049-19 [TP-E5 (0-5)]	B225002	25.7	250	03/05/19
19C0049-20 [TP-E5 (5-10)]	B225002	25.4	250	03/05/19
19C0049-21 [TP-E5 (10-15)]	B225002	25.9	250	03/05/19
19C0049-22 [TP-F4 (0-5)]	B225002	25.6	250	03/05/19
19C0049-23 [TP-F4 (5-10)]	B225002	25.6	250	03/05/19
19C0049-24 [TP-E4 (0-5)]	B225002	25.7	250	03/05/19
19C0049-25 [TP-E4 (5-10)]	B225002	25.8	250	03/05/19

**SW-846 9030A**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C0049-01 [TP-F8 (0-5)]	B224817	25.6	250	03/02/19
19C0049-02 [TP-F8 (5-10)]	B224817	25.7	250	03/02/19
19C0049-03 [TP-E8 (0-5)]	B224817	25.7	250	03/02/19
19C0049-04 [TP-E8 (5-10)]	B224817	25.1	250	03/02/19
19C0049-05 [TP-F6 (0-5)]	B224817	25.2	250	03/02/19
19C0049-06 [TP-F6 (5-10)]	B224817	25.5	250	03/02/19
19C0049-07 [TP-G6 (0-5)]	B224817	25.8	250	03/02/19
19C0049-08 [TP-G6 (5-10)]	B224817	25.2	250	03/02/19
19C0049-09 [TP-G7 (0-5)]	B224817	25.6	250	03/02/19
19C0049-10 [TP-G7 (5-10)]	B224817	25.7	250	03/02/19
19C0049-11 [TP-F7 (0-5)]	B224817	25.4	250	03/02/19
19C0049-12 [TP-F7 (5-10)]	B224817	25.1	250	03/02/19
19C0049-13 [TP-E7 (0-5)]	B224817	25.1	250	03/02/19
19C0049-14 [TP-E7 (5-10)]	B224817	25.5	250	03/02/19

**SW-846 9030A**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C0049-15 [TP-E6 (0-5)]	B225003	25.9	250	03/05/19
19C0049-16 [TP-E6 (5-10)]	B225003	25.5	250	03/05/19
19C0049-17 [TP-F5 (0-5)]	B225003	25.6	250	03/05/19
19C0049-18 [TP-F5 (5-10)]	B225003	25.3	250	03/05/19
19C0049-19 [TP-E5 (0-5)]	B225003	25.7	250	03/05/19
19C0049-20 [TP-E5 (5-10)]	B225003	25.4	250	03/05/19
19C0049-21 [TP-E5 (10-15)]	B225003	25.9	250	03/05/19
19C0049-22 [TP-F4 (0-5)]	B225003	25.6	250	03/05/19
19C0049-23 [TP-F4 (5-10)]	B225003	25.6	250	03/05/19
19C0049-24 [TP-E4 (0-5)]	B225003	25.7	250	03/05/19
19C0049-25 [TP-E4 (5-10)]	B225003	25.8	250	03/05/19

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

**Sample Extraction Data****SW-846 9045C**

<b>Lab Number [Field ID]</b>	<b>Batch</b>	<b>Initial [g]</b>	<b>Date</b>
19C0049-04 [TP-E8 (5-10)]	B224798	20.0	03/01/19
19C0049-05 [TP-F6 (0-5)]	B224798	20.0	03/01/19
19C0049-08 [TP-G6 (5-10)]	B224798	20.0	03/01/19
19C0049-09 [TP-G7 (0-5)]	B224798	20.0	03/01/19
19C0049-11 [TP-F7 (0-5)]	B224798	20.0	03/01/19
19C0049-13 [TP-E7 (0-5)]	B224798	20.0	03/01/19
19C0049-14 [TP-E7 (5-10)]	B224798	20.0	03/01/19
19C0049-18 [TP-F5 (5-10)]	B224798	20.0	03/01/19
19C0049-19 [TP-E5 (0-5)]	B224798	20.0	03/01/19
19C0049-21 [TP-E5 (10-15)]	B224798	20.0	03/01/19

**SW-846 9045C**

<b>Lab Number [Field ID]</b>	<b>Batch</b>	<b>Initial [g]</b>	<b>Date</b>
19C0049-01 [TP-F8 (0-5)]	B224806	20.0	03/01/19
19C0049-02 [TP-F8 (5-10)]	B224806	20.0	03/01/19
19C0049-03 [TP-E8 (0-5)]	B224806	20.0	03/01/19
19C0049-06 [TP-F6 (5-10)]	B224806	20.0	03/01/19
19C0049-07 [TP-G6 (0-5)]	B224806	20.0	03/01/19
19C0049-10 [TP-G7 (5-10)]	B224806	20.0	03/01/19
19C0049-12 [TP-F7 (5-10)]	B224806	20.0	03/01/19
19C0049-15 [TP-E6 (0-5)]	B224806	20.0	03/01/19
19C0049-16 [TP-E6 (5-10)]	B224806	20.0	03/01/19
19C0049-17 [TP-F5 (0-5)]	B224806	20.0	03/01/19
19C0049-20 [TP-E5 (5-10)]	B224806	20.0	03/01/19
19C0049-22 [TP-F4 (0-5)]	B224806	20.0	03/01/19
19C0049-23 [TP-F4 (5-10)]	B224806	20.0	03/01/19
19C0049-24 [TP-E4 (0-5)]	B224806	20.0	03/01/19
19C0049-25 [TP-E4 (5-10)]	B224806	20.0	03/01/19

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

**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 B224963 - SW-846 5035**

**Blank (B224963-BLK1)**

Prepared & Analyzed: 03/05/19

Acetone	ND	0.10	mg/Kg wet							R-05
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							
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							
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							



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 B224963 - SW-846 5035

Blank (B224963-BLK1)

Prepared & Analyzed: 03/05/19

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	0.0494		mg/Kg wet	0.0500		98.7	70-130			
Surrogate: Toluene-d8	0.0492		mg/Kg wet	0.0500		98.4	70-130			
Surrogate: 4-Bromofluorobenzene	0.0514		mg/Kg wet	0.0500		103	70-130			

LCS (B224963-BS1)

Prepared & Analyzed: 03/05/19

Acetone	0.221	0.10	mg/Kg wet	0.200		111	40-160			R-05 †
tert-Amyl Methyl Ether (TAME)	0.0221	0.0010	mg/Kg wet	0.0200		110	70-130			
Benzene	0.0207	0.0020	mg/Kg wet	0.0200		104	70-130			
Bromobenzene	0.0212	0.0020	mg/Kg wet	0.0200		106	70-130			
Bromochloromethane	0.0219	0.0020	mg/Kg wet	0.0200		110	70-130			
Bromodichloromethane	0.0218	0.0020	mg/Kg wet	0.0200		109	70-130			
Bromoform	0.0218	0.0020	mg/Kg wet	0.0200		109	70-130			
Bromomethane	0.0137	0.010	mg/Kg wet	0.0200		68.5	40-160			L-14, V-34 †
2-Butanone (MEK)	0.242	0.040	mg/Kg wet	0.200		121	40-160			†
n-Butylbenzene	0.0214	0.0020	mg/Kg wet	0.0200		107	70-130			
sec-Butylbenzene	0.0218	0.0020	mg/Kg wet	0.0200		109	70-130			
tert-Butylbenzene	0.0208	0.0020	mg/Kg wet	0.0200		104	70-130			
tert-Butyl Ethyl Ether (TBEE)	0.0215	0.0010	mg/Kg wet	0.0200		107	70-130			
Carbon Disulfide	0.0251	0.0060	mg/Kg wet	0.0200		125	70-130			
Carbon Tetrachloride	0.0223	0.0020	mg/Kg wet	0.0200		112	70-130			
Chlorobenzene	0.0215	0.0020	mg/Kg wet	0.0200		108	70-130			
Chlorodibromomethane	0.0226	0.0010	mg/Kg wet	0.0200		113	70-130			
Chloroethane	0.0231	0.010	mg/Kg wet	0.0200		116	70-130			
Chloroform	0.0207	0.0040	mg/Kg wet	0.0200		104	70-130			
Chloromethane	0.0175	0.010	mg/Kg wet	0.0200		87.4	40-160			†
2-Chlorotoluene	0.0221	0.0020	mg/Kg wet	0.0200		111	70-130			
4-Chlorotoluene	0.0215	0.0020	mg/Kg wet	0.0200		107	70-130			
1,2-Dibromo-3-chloropropane (DBCP)	0.0205	0.0020	mg/Kg wet	0.0200		103	70-130			
1,2-Dibromoethane (EDB)	0.0224	0.0010	mg/Kg wet	0.0200		112	70-130			
Dibromomethane	0.0223	0.0020	mg/Kg wet	0.0200		111	70-130			
1,2-Dichlorobenzene	0.0212	0.0020	mg/Kg wet	0.0200		106	70-130			
1,3-Dichlorobenzene	0.0215	0.0020	mg/Kg wet	0.0200		108	70-130			
1,4-Dichlorobenzene	0.0201	0.0020	mg/Kg wet	0.0200		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
<b>Batch B224963 - SW-846 5035</b>										
<b>LCS (B224963-BS1)</b>										
Prepared & Analyzed: 03/05/19										
Dichlorodifluoromethane (Freon 12)	0.0201	0.010	mg/Kg wet	0.0200		101	40-160			†
1,1-Dichloroethane	0.0215	0.0020	mg/Kg wet	0.0200		108	70-130			
1,2-Dichloroethane	0.0218	0.0020	mg/Kg wet	0.0200		109	70-130			
1,1-Dichloroethylene	0.0220	0.0040	mg/Kg wet	0.0200		110	70-130			
cis-1,2-Dichloroethylene	0.0209	0.0020	mg/Kg wet	0.0200		105	70-130			
trans-1,2-Dichloroethylene	0.0218	0.0020	mg/Kg wet	0.0200		109	70-130			
1,2-Dichloropropane	0.0212	0.0020	mg/Kg wet	0.0200		106	70-130			
1,3-Dichloropropane	0.0207	0.0010	mg/Kg wet	0.0200		103	70-130			
2,2-Dichloropropane	0.0203	0.0020	mg/Kg wet	0.0200		102	70-130			
1,1-Dichloropropene	0.0210	0.0020	mg/Kg wet	0.0200		105	70-130			
cis-1,3-Dichloropropene	0.0218	0.0010	mg/Kg wet	0.0200		109	70-130			
trans-1,3-Dichloropropene	0.0222	0.0010	mg/Kg wet	0.0200		111	70-130			
Diethyl Ether	0.0212	0.010	mg/Kg wet	0.0200		106	70-130			
Diisopropyl Ether (DIPE)	0.0216	0.0010	mg/Kg wet	0.0200		108	70-130			
1,4-Dioxane	0.233	0.10	mg/Kg wet	0.200		117	40-160			V-16 †
Ethylbenzene	0.0211	0.0020	mg/Kg wet	0.0200		105	70-130			
Hexachlorobutadiene	0.0219	0.0020	mg/Kg wet	0.0200		110	70-130			
2-Hexanone (MBK)	0.224	0.020	mg/Kg wet	0.200		112	40-160			†
Isopropylbenzene (Cumene)	0.0226	0.0020	mg/Kg wet	0.0200		113	70-130			
p-Isopropyltoluene (p-Cymene)	0.0214	0.0020	mg/Kg wet	0.0200		107	70-130			
Methyl tert-Butyl Ether (MTBE)	0.0233	0.0040	mg/Kg wet	0.0200		116	70-130			
Methylene Chloride	0.0202	0.010	mg/Kg wet	0.0200		101	70-130			
4-Methyl-2-pentanone (MIBK)	0.223	0.020	mg/Kg wet	0.200		111	40-160			†
Naphthalene	0.0198	0.0040	mg/Kg wet	0.0200		99.0	70-130			
n-Propylbenzene	0.0218	0.0020	mg/Kg wet	0.0200		109	70-130			
Styrene	0.0212	0.0020	mg/Kg wet	0.0200		106	70-130			
1,1,1,2-Tetrachloroethane	0.0218	0.0020	mg/Kg wet	0.0200		109	70-130			
1,1,1,2,2-Tetrachloroethane	0.0228	0.0010	mg/Kg wet	0.0200		114	70-130			
Tetrachloroethylene	0.0223	0.0020	mg/Kg wet	0.0200		112	70-130			
Tetrahydrofuran	0.0205	0.010	mg/Kg wet	0.0200		102	70-130			
Toluene	0.0212	0.0020	mg/Kg wet	0.0200		106	70-130			
1,2,3-Trichlorobenzene	0.0204	0.0020	mg/Kg wet	0.0200		102	70-130			
1,2,4-Trichlorobenzene	0.0201	0.0020	mg/Kg wet	0.0200		101	70-130			
1,1,1-Trichloroethane	0.0223	0.0020	mg/Kg wet	0.0200		112	70-130			
1,1,2-Trichloroethane	0.0225	0.0020	mg/Kg wet	0.0200		113	70-130			
Trichloroethylene	0.0211	0.0020	mg/Kg wet	0.0200		105	70-130			
Trichlorofluoromethane (Freon 11)	0.0209	0.010	mg/Kg wet	0.0200		105	70-130			
1,2,3-Trichloropropane	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130			
1,2,4-Trimethylbenzene	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130			
1,3,5-Trimethylbenzene	0.0221	0.0020	mg/Kg wet	0.0200		111	70-130			
Vinyl Chloride	0.0187	0.010	mg/Kg wet	0.0200		93.6	70-130			
m+p Xylene	0.0428	0.0040	mg/Kg wet	0.0400		107	70-130			
o-Xylene	0.0214	0.0020	mg/Kg wet	0.0200		107	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0498		mg/Kg wet	0.0500		99.6	70-130			
Surrogate: Toluene-d8	0.0501		mg/Kg wet	0.0500		100	70-130			
Surrogate: 4-Bromofluorobenzene	0.0514		mg/Kg wet	0.0500		103	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
<b>Batch B224963 - SW-846 5035</b>										
<b>LCS Dup (B224963-BSD1)</b>										
Prepared & Analyzed: 03/05/19										
Acetone	0.277	0.10	mg/Kg wet	0.200		138	40-160	22.1 *	20	L-14, R-05 †
tert-Amyl Methyl Ether (TAME)	0.0215	0.0010	mg/Kg wet	0.0200		108	70-130	2.50	20	
Benzene	0.0200	0.0020	mg/Kg wet	0.0200		100	70-130	3.49	20	
Bromobenzene	0.0200	0.0020	mg/Kg wet	0.0200		100	70-130	5.37	20	
Bromochloromethane	0.0215	0.0020	mg/Kg wet	0.0200		108	70-130	1.97	20	
Bromodichloromethane	0.0207	0.0020	mg/Kg wet	0.0200		103	70-130	5.26	20	
Bromoform	0.0213	0.0020	mg/Kg wet	0.0200		107	70-130	2.41	20	
Bromomethane	0.0145	0.010	mg/Kg wet	0.0200		72.7	40-160	5.85	20	V-34 †
2-Butanone (MEK)	0.254	0.040	mg/Kg wet	0.200		127	40-160	4.81	20	†
n-Butylbenzene	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130	5.68	20	
sec-Butylbenzene	0.0207	0.0020	mg/Kg wet	0.0200		104	70-130	4.85	20	
tert-Butylbenzene	0.0201	0.0020	mg/Kg wet	0.0200		101	70-130	3.33	20	
tert-Butyl Ethyl Ether (TBEE)	0.0210	0.0010	mg/Kg wet	0.0200		105	70-130	2.38	20	
Carbon Disulfide	0.0236	0.0060	mg/Kg wet	0.0200		118	70-130	6.14	20	
Carbon Tetrachloride	0.0213	0.0020	mg/Kg wet	0.0200		106	70-130	4.87	20	
Chlorobenzene	0.0204	0.0020	mg/Kg wet	0.0200		102	70-130	5.62	20	
Chlorodibromomethane	0.0219	0.0010	mg/Kg wet	0.0200		109	70-130	3.17	20	
Chloroethane	0.0226	0.010	mg/Kg wet	0.0200		113	70-130	2.29	20	
Chloroform	0.0200	0.0040	mg/Kg wet	0.0200		100	70-130	3.45	20	
Chloromethane	0.0167	0.010	mg/Kg wet	0.0200		83.7	40-160	4.35	20	†
2-Chlorotoluene	0.0205	0.0020	mg/Kg wet	0.0200		102	70-130	7.80	20	
4-Chlorotoluene	0.0204	0.0020	mg/Kg wet	0.0200		102	70-130	5.19	20	
1,2-Dibromo-3-chloropropane (DBCP)	0.0214	0.0020	mg/Kg wet	0.0200		107	70-130	4.14	20	
1,2-Dibromoethane (EDB)	0.0222	0.0010	mg/Kg wet	0.0200		111	70-130	0.511	20	
Dibromomethane	0.0216	0.0020	mg/Kg wet	0.0200		108	70-130	3.26	20	
1,2-Dichlorobenzene	0.0201	0.0020	mg/Kg wet	0.0200		100	70-130	5.38	20	
1,3-Dichlorobenzene	0.0206	0.0020	mg/Kg wet	0.0200		103	70-130	4.19	20	
1,4-Dichlorobenzene	0.0193	0.0020	mg/Kg wet	0.0200		96.4	70-130	4.27	20	
Dichlorodifluoromethane (Freon 12)	0.0195	0.010	mg/Kg wet	0.0200		97.5	40-160	3.07	20	†
1,1-Dichloroethane	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130	6.62	20	
1,2-Dichloroethane	0.0199	0.0020	mg/Kg wet	0.0200		99.4	70-130	9.37	20	
1,1-Dichloroethylene	0.0215	0.0040	mg/Kg wet	0.0200		107	70-130	2.55	20	
cis-1,2-Dichloroethylene	0.0199	0.0020	mg/Kg wet	0.0200		99.3	70-130	5.08	20	
trans-1,2-Dichloroethylene	0.0205	0.0020	mg/Kg wet	0.0200		103	70-130	6.07	20	
1,2-Dichloropropane	0.0197	0.0020	mg/Kg wet	0.0200		98.5	70-130	7.18	20	
1,3-Dichloropropane	0.0200	0.0010	mg/Kg wet	0.0200		100	70-130	3.16	20	
2,2-Dichloropropane	0.0198	0.0020	mg/Kg wet	0.0200		99.0	70-130	2.63	20	
1,1-Dichloropropene	0.0200	0.0020	mg/Kg wet	0.0200		100	70-130	5.10	20	
cis-1,3-Dichloropropene	0.0205	0.0010	mg/Kg wet	0.0200		103	70-130	5.99	20	
trans-1,3-Dichloropropene	0.0212	0.0010	mg/Kg wet	0.0200		106	70-130	4.58	20	
Diethyl Ether	0.0205	0.010	mg/Kg wet	0.0200		102	70-130	3.39	20	
Diisopropyl Ether (DIPE)	0.0207	0.0010	mg/Kg wet	0.0200		104	70-130	4.22	20	
1,4-Dioxane	0.217	0.10	mg/Kg wet	0.200		108	40-160	7.18	20	V-16 †
Ethylbenzene	0.0199	0.0020	mg/Kg wet	0.0200		99.7	70-130	5.40	20	
Hexachlorobutadiene	0.0212	0.0020	mg/Kg wet	0.0200		106	70-130	3.56	20	
2-Hexanone (MBK)	0.225	0.020	mg/Kg wet	0.200		112	40-160	0.497	20	†
Isopropylbenzene (Cumene)	0.0211	0.0020	mg/Kg wet	0.0200		106	70-130	6.85	20	
p-Isopropyltoluene (p-Cymene)	0.0206	0.0020	mg/Kg wet	0.0200		103	70-130	3.90	20	
Methyl tert-Butyl Ether (MTBE)	0.0236	0.0040	mg/Kg wet	0.0200		118	70-130	1.36	20	
Methylene Chloride	0.0225	0.010	mg/Kg wet	0.0200		113	70-130	10.9	20	
4-Methyl-2-pentanone (MIBK)	0.216	0.020	mg/Kg wet	0.200		108	40-160	2.84	20	†
Naphthalene	0.0196	0.0040	mg/Kg wet	0.0200		97.9	70-130	1.18	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
<b>Batch B224963 - SW-846 5035</b>										
<b>LCS Dup (B224963-BSD1)</b>										
Prepared & Analyzed: 03/05/19										
n-Propylbenzene	0.0205	0.0020	mg/Kg wet	0.0200		102	70-130	6.35	20	
Styrene	0.0200	0.0020	mg/Kg wet	0.0200		100	70-130	5.83	20	
1,1,1,2-Tetrachloroethane	0.0203	0.0020	mg/Kg wet	0.0200		102	70-130	6.95	20	
1,1,2,2-Tetrachloroethane	0.0215	0.0010	mg/Kg wet	0.0200		107	70-130	5.99	20	
Tetrachloroethylene	0.0208	0.0020	mg/Kg wet	0.0200		104	70-130	7.20	20	
Tetrahydrofuran	0.0207	0.010	mg/Kg wet	0.0200		104	70-130	1.06	20	
Toluene	0.0200	0.0020	mg/Kg wet	0.0200		100	70-130	5.82	20	
1,2,3-Trichlorobenzene	0.0195	0.0020	mg/Kg wet	0.0200		97.5	70-130	4.64	20	
1,2,4-Trichlorobenzene	0.0195	0.0020	mg/Kg wet	0.0200		97.4	70-130	3.20	20	
1,1,1-Trichloroethane	0.0208	0.0020	mg/Kg wet	0.0200		104	70-130	6.94	20	
1,1,2-Trichloroethane	0.0214	0.0020	mg/Kg wet	0.0200		107	70-130	5.15	20	
Trichloroethylene	0.0199	0.0020	mg/Kg wet	0.0200		99.6	70-130	5.69	20	
Trichlorofluoromethane (Freon 11)	0.0196	0.010	mg/Kg wet	0.0200		97.8	70-130	6.61	20	
1,2,3-Trichloropropane	0.0191	0.0020	mg/Kg wet	0.0200		95.3	70-130	5.75	20	
1,2,4-Trimethylbenzene	0.0190	0.0020	mg/Kg wet	0.0200		94.8	70-130	6.42	20	
1,3,5-Trimethylbenzene	0.0204	0.0020	mg/Kg wet	0.0200		102	70-130	7.76	20	
Vinyl Chloride	0.0185	0.010	mg/Kg wet	0.0200		92.3	70-130	1.42	20	
m+p Xylene	0.0403	0.0040	mg/Kg wet	0.0400		101	70-130	6.01	20	
o-Xylene	0.0199	0.0020	mg/Kg wet	0.0200		99.6	70-130	7.08	20	
Surrogate: 1,2-Dichloroethane-d4	0.0518		mg/Kg wet	0.0500		104	70-130			
Surrogate: Toluene-d8	0.0496		mg/Kg wet	0.0500		99.1	70-130			
Surrogate: 4-Bromofluorobenzene	0.0507		mg/Kg wet	0.0500		101	70-130			

**Batch B224964 - SW-846 5035**

**Blank (B224964-BLK1)**

Prepared & Analyzed: 03/05/19

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							
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							

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
<b>Batch B224964 - SW-846 5035</b>										
<b>Blank (B224964-BLK1)</b>										
Prepared & Analyzed: 03/05/19										
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							
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							
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	0.0474		mg/Kg wet	0.0500		94.8	70-130			
Surrogate: Toluene-d8	0.0496		mg/Kg wet	0.0500		99.2	70-130			
Surrogate: 4-Bromofluorobenzene	0.0507		mg/Kg wet	0.0500		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
<b>Batch B224964 - SW-846 5035</b>										
<b>LCS (B224964-BS1)</b>										
Prepared & Analyzed: 03/05/19										
Acetone	0.234	0.10	mg/Kg wet	0.200		117	40-160			†
tert-Amyl Methyl Ether (TAME)	0.0191	0.0010	mg/Kg wet	0.0200		95.7	70-130			
Benzene	0.0172	0.0020	mg/Kg wet	0.0200		86.2	70-130			
Bromobenzene	0.0197	0.0020	mg/Kg wet	0.0200		98.7	70-130			
Bromochloromethane	0.0199	0.0020	mg/Kg wet	0.0200		99.5	70-130			
Bromodichloromethane	0.0190	0.0020	mg/Kg wet	0.0200		95.1	70-130			
Bromoform	0.0207	0.0020	mg/Kg wet	0.0200		103	70-130			
Bromomethane	0.0148	0.010	mg/Kg wet	0.0200		73.8	40-160			V-34 †
2-Butanone (MEK)	0.191	0.040	mg/Kg wet	0.200		95.6	40-160			†
n-Butylbenzene	0.0180	0.0020	mg/Kg wet	0.0200		90.2	70-130			
sec-Butylbenzene	0.0195	0.0020	mg/Kg wet	0.0200		97.7	70-130			
tert-Butylbenzene	0.0189	0.0020	mg/Kg wet	0.0200		94.5	70-130			
tert-Butyl Ethyl Ether (TBEE)	0.0178	0.0010	mg/Kg wet	0.0200		89.2	70-130			
Carbon Disulfide	0.0214	0.0060	mg/Kg wet	0.0200		107	70-130			
Carbon Tetrachloride	0.0182	0.0020	mg/Kg wet	0.0200		91.0	70-130			
Chlorobenzene	0.0194	0.0020	mg/Kg wet	0.0200		96.8	70-130			
Chlorodibromomethane	0.0205	0.0010	mg/Kg wet	0.0200		102	70-130			
Chloroethane	0.0178	0.010	mg/Kg wet	0.0200		89.0	70-130			
Chloroform	0.0180	0.0040	mg/Kg wet	0.0200		90.0	70-130			
Chloromethane	0.0173	0.010	mg/Kg wet	0.0200		86.6	40-160			†
2-Chlorotoluene	0.0184	0.0020	mg/Kg wet	0.0200		92.0	70-130			
4-Chlorotoluene	0.0191	0.0020	mg/Kg wet	0.0200		95.4	70-130			
1,2-Dibromo-3-chloropropane (DBCP)	0.0181	0.0020	mg/Kg wet	0.0200		90.7	70-130			
1,2-Dibromoethane (EDB)	0.0198	0.0010	mg/Kg wet	0.0200		98.8	70-130			
Dibromomethane	0.0212	0.0020	mg/Kg wet	0.0200		106	70-130			
1,2-Dichlorobenzene	0.0207	0.0020	mg/Kg wet	0.0200		103	70-130			
1,3-Dichlorobenzene	0.0197	0.0020	mg/Kg wet	0.0200		98.5	70-130			
1,4-Dichlorobenzene	0.0190	0.0020	mg/Kg wet	0.0200		95.2	70-130			
Dichlorodifluoromethane (Freon 12)	0.0165	0.010	mg/Kg wet	0.0200		82.4	40-160			†
1,1-Dichloroethane	0.0188	0.0020	mg/Kg wet	0.0200		93.8	70-130			
1,2-Dichloroethane	0.0193	0.0020	mg/Kg wet	0.0200		96.4	70-130			
1,1-Dichloroethylene	0.0192	0.0040	mg/Kg wet	0.0200		96.0	70-130			
cis-1,2-Dichloroethylene	0.0185	0.0020	mg/Kg wet	0.0200		92.6	70-130			
trans-1,2-Dichloroethylene	0.0183	0.0020	mg/Kg wet	0.0200		91.5	70-130			
1,2-Dichloropropane	0.0178	0.0020	mg/Kg wet	0.0200		89.0	70-130			
1,3-Dichloropropane	0.0191	0.0010	mg/Kg wet	0.0200		95.5	70-130			
2,2-Dichloropropane	0.0170	0.0020	mg/Kg wet	0.0200		85.2	70-130			
1,1-Dichloropropene	0.0185	0.0020	mg/Kg wet	0.0200		92.3	70-130			
cis-1,3-Dichloropropene	0.0201	0.0010	mg/Kg wet	0.0200		101	70-130			
trans-1,3-Dichloropropene	0.0189	0.0010	mg/Kg wet	0.0200		94.6	70-130			
Diethyl Ether	0.0209	0.010	mg/Kg wet	0.0200		105	70-130			
Diisopropyl Ether (DIPE)	0.0184	0.0010	mg/Kg wet	0.0200		91.8	70-130			
1,4-Dioxane	0.154	0.10	mg/Kg wet	0.200		77.1	40-160			V-16 †
Ethylbenzene	0.0177	0.0020	mg/Kg wet	0.0200		88.3	70-130			
Hexachlorobutadiene	0.0206	0.0020	mg/Kg wet	0.0200		103	70-130			
2-Hexanone (MBK)	0.195	0.020	mg/Kg wet	0.200		97.3	40-160			†
Isopropylbenzene (Cumene)	0.0196	0.0020	mg/Kg wet	0.0200		97.9	70-130			
p-Isopropyltoluene (p-Cymene)	0.0192	0.0020	mg/Kg wet	0.0200		96.0	70-130			
Methyl tert-Butyl Ether (MTBE)	0.0194	0.0040	mg/Kg wet	0.0200		96.9	70-130			
Methylene Chloride	0.0181	0.010	mg/Kg wet	0.0200		90.5	70-130			
4-Methyl-2-pentanone (MIBK)	0.200	0.020	mg/Kg wet	0.200		100	40-160			†
Naphthalene	0.0187	0.0040	mg/Kg wet	0.0200		93.6	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 B224964 - SW-846 5035**

**LCS (B224964-BS1)**

Prepared & Analyzed: 03/05/19

n-Propylbenzene	0.0191	0.0020	mg/Kg wet	0.0200		95.6	70-130			
Styrene	0.0204	0.0020	mg/Kg wet	0.0200		102	70-130			
1,1,1,2-Tetrachloroethane	0.0205	0.0020	mg/Kg wet	0.0200		102	70-130			
1,1,2,2-Tetrachloroethane	0.0187	0.0010	mg/Kg wet	0.0200		93.6	70-130			
Tetrachloroethylene	0.0195	0.0020	mg/Kg wet	0.0200		97.6	70-130			
Tetrahydrofuran	0.0217	0.010	mg/Kg wet	0.0200		108	70-130			
Toluene	0.0185	0.0020	mg/Kg wet	0.0200		92.3	70-130			
1,2,3-Trichlorobenzene	0.0195	0.0020	mg/Kg wet	0.0200		97.7	70-130			
1,2,4-Trichlorobenzene	0.0207	0.0020	mg/Kg wet	0.0200		103	70-130			
1,1,1-Trichloroethane	0.0171	0.0020	mg/Kg wet	0.0200		85.7	70-130			
1,1,2-Trichloroethane	0.0189	0.0020	mg/Kg wet	0.0200		94.5	70-130			
Trichloroethylene	0.0184	0.0020	mg/Kg wet	0.0200		91.8	70-130			
Trichlorofluoromethane (Freon 11)	0.0171	0.010	mg/Kg wet	0.0200		85.4	70-130			
1,2,3-Trichloropropane	0.0190	0.0020	mg/Kg wet	0.0200		95.1	70-130			
1,2,4-Trimethylbenzene	0.0176	0.0020	mg/Kg wet	0.0200		88.0	70-130			
1,3,5-Trimethylbenzene	0.0186	0.0020	mg/Kg wet	0.0200		93.2	70-130			
Vinyl Chloride	0.0167	0.010	mg/Kg wet	0.0200		83.3	70-130			
m+p Xylene	0.0350	0.0040	mg/Kg wet	0.0400		87.6	70-130			
o-Xylene	0.0184	0.0020	mg/Kg wet	0.0200		92.0	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0473		mg/Kg wet	0.0500		94.5	70-130			
Surrogate: Toluene-d8	0.0496		mg/Kg wet	0.0500		99.2	70-130			
Surrogate: 4-Bromofluorobenzene	0.0502		mg/Kg wet	0.0500		100	70-130			

**LCS Dup (B224964-BS1)**

Prepared & Analyzed: 03/05/19

Acetone	0.221	0.10	mg/Kg wet	0.200		111	40-160	5.40	20	†
tert-Amyl Methyl Ether (TAME)	0.0191	0.0010	mg/Kg wet	0.0200		95.5	70-130	0.209	20	
Benzene	0.0174	0.0020	mg/Kg wet	0.0200		87.1	70-130	1.04	20	
Bromobenzene	0.0191	0.0020	mg/Kg wet	0.0200		95.6	70-130	3.19	20	
Bromochloromethane	0.0197	0.0020	mg/Kg wet	0.0200		98.3	70-130	1.21	20	
Bromodichloromethane	0.0190	0.0020	mg/Kg wet	0.0200		95.0	70-130	0.105	20	
Bromoform	0.0201	0.0020	mg/Kg wet	0.0200		101	70-130	2.55	20	
Bromomethane	0.0175	0.010	mg/Kg wet	0.0200		87.5	40-160	17.0	20	V-34 †
2-Butanone (MEK)	0.199	0.040	mg/Kg wet	0.200		99.5	40-160	3.99	20	†
n-Butylbenzene	0.0184	0.0020	mg/Kg wet	0.0200		91.8	70-130	1.76	20	
sec-Butylbenzene	0.0210	0.0020	mg/Kg wet	0.0200		105	70-130	7.01	20	
tert-Butylbenzene	0.0191	0.0020	mg/Kg wet	0.0200		95.3	70-130	0.843	20	
tert-Butyl Ethyl Ether (TBEE)	0.0183	0.0010	mg/Kg wet	0.0200		91.3	70-130	2.33	20	
Carbon Disulfide	0.0223	0.0060	mg/Kg wet	0.0200		112	70-130	4.31	20	
Carbon Tetrachloride	0.0185	0.0020	mg/Kg wet	0.0200		92.6	70-130	1.74	20	
Chlorobenzene	0.0200	0.0020	mg/Kg wet	0.0200		100	70-130	3.35	20	
Chlorodibromomethane	0.0213	0.0010	mg/Kg wet	0.0200		106	70-130	3.93	20	
Chloroethane	0.0196	0.010	mg/Kg wet	0.0200		97.9	70-130	9.52	20	
Chloroform	0.0179	0.0040	mg/Kg wet	0.0200		89.7	70-130	0.334	20	
Chloromethane	0.0173	0.010	mg/Kg wet	0.0200		86.4	40-160	0.231	20	†
2-Chlorotoluene	0.0184	0.0020	mg/Kg wet	0.0200		92.0	70-130	0.00	20	
4-Chlorotoluene	0.0186	0.0020	mg/Kg wet	0.0200		92.9	70-130	2.66	20	
1,2-Dibromo-3-chloropropane (DBCP)	0.0165	0.0020	mg/Kg wet	0.0200		82.5	70-130	9.47	20	
1,2-Dibromoethane (EDB)	0.0201	0.0010	mg/Kg wet	0.0200		101	70-130	1.90	20	
Dibromomethane	0.0201	0.0020	mg/Kg wet	0.0200		100	70-130	5.42	20	
1,2-Dichlorobenzene	0.0208	0.0020	mg/Kg wet	0.0200		104	70-130	0.482	20	
1,3-Dichlorobenzene	0.0206	0.0020	mg/Kg wet	0.0200		103	70-130	4.66	20	
1,4-Dichlorobenzene	0.0194	0.0020	mg/Kg wet	0.0200		97.1	70-130	1.98	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
<b>Batch B224964 - SW-846 5035</b>										
<b>LCS Dup (B224964-BSD1)</b>										
Prepared & Analyzed: 03/05/19										
Dichlorodifluoromethane (Freon 12)	0.0167	0.010	mg/Kg wet	0.0200		83.6	40-160	1.45	20	†
1,1-Dichloroethane	0.0185	0.0020	mg/Kg wet	0.0200		92.7	70-130	1.18	20	
1,2-Dichloroethane	0.0200	0.0020	mg/Kg wet	0.0200		99.9	70-130	3.57	20	
1,1-Dichloroethylene	0.0189	0.0040	mg/Kg wet	0.0200		94.4	70-130	1.68	20	
cis-1,2-Dichloroethylene	0.0186	0.0020	mg/Kg wet	0.0200		93.2	70-130	0.646	20	
trans-1,2-Dichloroethylene	0.0192	0.0020	mg/Kg wet	0.0200		95.9	70-130	4.70	20	
1,2-Dichloropropane	0.0187	0.0020	mg/Kg wet	0.0200		93.3	70-130	4.72	20	
1,3-Dichloropropane	0.0193	0.0010	mg/Kg wet	0.0200		96.4	70-130	0.938	20	
2,2-Dichloropropane	0.0169	0.0020	mg/Kg wet	0.0200		84.3	70-130	1.06	20	
1,1-Dichloropropene	0.0176	0.0020	mg/Kg wet	0.0200		87.8	70-130	5.00	20	
cis-1,3-Dichloropropene	0.0206	0.0010	mg/Kg wet	0.0200		103	70-130	2.45	20	
trans-1,3-Dichloropropene	0.0199	0.0010	mg/Kg wet	0.0200		99.7	70-130	5.25	20	
Diethyl Ether	0.0200	0.010	mg/Kg wet	0.0200		100	70-130	4.49	20	
Diisopropyl Ether (DIPE)	0.0191	0.0010	mg/Kg wet	0.0200		95.5	70-130	3.95	20	
1,4-Dioxane	0.161	0.10	mg/Kg wet	0.200		80.3	40-160	4.02	20	V-16 †
Ethylbenzene	0.0180	0.0020	mg/Kg wet	0.0200		90.0	70-130	1.91	20	
Hexachlorobutadiene	0.0214	0.0020	mg/Kg wet	0.0200		107	70-130	3.81	20	
2-Hexanone (MBK)	0.209	0.020	mg/Kg wet	0.200		105	40-160	7.28	20	†
Isopropylbenzene (Cumene)	0.0197	0.0020	mg/Kg wet	0.0200		98.5	70-130	0.611	20	
p-Isopropyltoluene (p-Cymene)	0.0187	0.0020	mg/Kg wet	0.0200		93.5	70-130	2.64	20	
Methyl tert-Butyl Ether (MTBE)	0.0189	0.0040	mg/Kg wet	0.0200		94.6	70-130	2.40	20	
Methylene Chloride	0.0189	0.010	mg/Kg wet	0.0200		94.6	70-130	4.43	20	
4-Methyl-2-pentanone (MIBK)	0.209	0.020	mg/Kg wet	0.200		105	40-160	4.62	20	†
Naphthalene	0.0185	0.0040	mg/Kg wet	0.0200		92.7	70-130	0.966	20	
n-Propylbenzene	0.0187	0.0020	mg/Kg wet	0.0200		93.3	70-130	2.44	20	
Styrene	0.0200	0.0020	mg/Kg wet	0.0200		100	70-130	2.08	20	
1,1,1,2-Tetrachloroethane	0.0197	0.0020	mg/Kg wet	0.0200		98.3	70-130	4.18	20	
1,1,2,2-Tetrachloroethane	0.0199	0.0010	mg/Kg wet	0.0200		99.5	70-130	6.11	20	
Tetrachloroethylene	0.0208	0.0020	mg/Kg wet	0.0200		104	70-130	6.16	20	
Tetrahydrofuran	0.0217	0.010	mg/Kg wet	0.0200		108	70-130	0.00	20	
Toluene	0.0186	0.0020	mg/Kg wet	0.0200		92.8	70-130	0.540	20	
1,2,3-Trichlorobenzene	0.0195	0.0020	mg/Kg wet	0.0200		97.7	70-130	0.00	20	
1,2,4-Trichlorobenzene	0.0209	0.0020	mg/Kg wet	0.0200		104	70-130	1.06	20	
1,1,1-Trichloroethane	0.0170	0.0020	mg/Kg wet	0.0200		84.9	70-130	0.938	20	
1,1,2-Trichloroethane	0.0186	0.0020	mg/Kg wet	0.0200		92.9	70-130	1.71	20	
Trichloroethylene	0.0185	0.0020	mg/Kg wet	0.0200		92.4	70-130	0.651	20	
Trichlorofluoromethane (Freon 11)	0.0167	0.010	mg/Kg wet	0.0200		83.6	70-130	2.13	20	
1,2,3-Trichloropropane	0.0198	0.0020	mg/Kg wet	0.0200		99.1	70-130	4.12	20	
1,2,4-Trimethylbenzene	0.0179	0.0020	mg/Kg wet	0.0200		89.4	70-130	1.58	20	
1,3,5-Trimethylbenzene	0.0177	0.0020	mg/Kg wet	0.0200		88.5	70-130	5.17	20	
Vinyl Chloride	0.0174	0.010	mg/Kg wet	0.0200		86.8	70-130	4.12	20	
m+p Xylene	0.0355	0.0040	mg/Kg wet	0.0400		88.8	70-130	1.36	20	
o-Xylene	0.0186	0.0020	mg/Kg wet	0.0200		92.8	70-130	0.866	20	
Surrogate: 1,2-Dichloroethane-d4	0.0471		mg/Kg wet	0.0500		94.1	70-130			
Surrogate: Toluene-d8	0.0488		mg/Kg wet	0.0500		97.6	70-130			
Surrogate: 4-Bromofluorobenzene	0.0496		mg/Kg wet	0.0500		99.2	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
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Batch B224909 - SW-846 3546

Blank (B224909-BLK1)

Prepared: 03/04/19 Analyzed: 03/06/19

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							
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							
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							
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							
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							
2,4-Dinitrophenol	ND	0.66	mg/Kg wet							
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							
1,2-Diphenylhydrazine/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							

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
<b>Batch B224909 - SW-846 3546</b>										
<b>Blank (B224909-BLK1)</b>										
Prepared: 03/04/19 Analyzed: 03/06/19										
Phenol	ND	0.34	mg/Kg wet							
Pyrene	ND	0.17	mg/Kg wet							
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	5.36		mg/Kg wet	6.67		80.5	30-130			
Surrogate: Phenol-d6	5.28		mg/Kg wet	6.67		79.3	30-130			
Surrogate: Nitrobenzene-d5	2.65		mg/Kg wet	3.33		79.5	30-130			
Surrogate: 2-Fluorobiphenyl	2.66		mg/Kg wet	3.33		79.9	30-130			
Surrogate: 2,4,6-Tribromophenol	5.82		mg/Kg wet	6.67		87.3	30-130			
Surrogate: p-Terphenyl-d14	3.17		mg/Kg wet	3.33		95.2	30-130			
<b>LCS (B224909-BS1)</b>										
Prepared: 03/04/19 Analyzed: 03/06/19										
Acenaphthene	1.13	0.17	mg/Kg wet	1.67		67.9	40-140			
Acenaphthylene	1.14	0.17	mg/Kg wet	1.67		68.3	40-140			
Acetophenone	1.05	0.34	mg/Kg wet	1.67		63.2	40-140			
<b>Aniline</b>	0.571	0.34	mg/Kg wet	1.67		<b>34.2</b>	40-140	*		L-04, V-34
Anthracene	1.23	0.17	mg/Kg wet	1.67		73.7	40-140			
Benzo(a)anthracene	1.16	0.17	mg/Kg wet	1.67		69.9	40-140			
Benzo(a)pyrene	1.28	0.17	mg/Kg wet	1.67		76.9	40-140			
Benzo(b)fluoranthene	1.19	0.17	mg/Kg wet	1.67		71.6	40-140			
Benzo(g,h,i)perylene	1.36	0.17	mg/Kg wet	1.67		81.5	40-140			
Benzo(k)fluoranthene	1.21	0.17	mg/Kg wet	1.67		72.8	40-140			
Bis(2-chloroethoxy)methane	1.34	0.34	mg/Kg wet	1.67		80.4	40-140			
Bis(2-chloroethyl)ether	1.21	0.34	mg/Kg wet	1.67		72.8	40-140			
Bis(2-chloroisopropyl)ether	1.38	0.34	mg/Kg wet	1.67		82.6	40-140			
Bis(2-Ethylhexyl)phthalate	1.28	0.34	mg/Kg wet	1.67		76.6	40-140			
4-Bromophenylphenylether	1.26	0.34	mg/Kg wet	1.67		75.3	40-140			
Butylbenzylphthalate	1.28	0.34	mg/Kg wet	1.67		76.5	40-140			
4-Chloroaniline	0.538	0.66	mg/Kg wet	1.67		32.3	15-140			V-34 †
2-Chloronaphthalene	0.967	0.34	mg/Kg wet	1.67		58.0	40-140			
2-Chlorophenol	1.15	0.34	mg/Kg wet	1.67		69.1	30-130			
Chrysene	1.22	0.17	mg/Kg wet	1.67		72.9	40-140			
Dibenz(a,h)anthracene	1.32	0.17	mg/Kg wet	1.67		79.0	40-140			
Dibenzofuran	1.16	0.34	mg/Kg wet	1.67		69.5	40-140			
Di-n-butylphthalate	1.23	0.34	mg/Kg wet	1.67		73.5	40-140			
1,2-Dichlorobenzene	1.03	0.34	mg/Kg wet	1.67		62.0	40-140			
1,3-Dichlorobenzene	1.01	0.34	mg/Kg wet	1.67		60.8	40-140			
1,4-Dichlorobenzene	1.02	0.34	mg/Kg wet	1.67		61.2	40-140			
3,3-Dichlorobenzidine	0.850	0.17	mg/Kg wet	1.67		51.0	40-140			
2,4-Dichlorophenol	1.21	0.34	mg/Kg wet	1.67		72.7	30-130			
Diethylphthalate	1.21	0.34	mg/Kg wet	1.67		72.4	40-140			
2,4-Dimethylphenol	1.09	0.34	mg/Kg wet	1.67		65.5	30-130			
Dimethylphthalate	1.25	0.34	mg/Kg wet	1.67		74.7	40-140			
2,4-Dinitrophenol	1.08	0.66	mg/Kg wet	1.67		64.5	15-140			†
2,4-Dinitrotoluene	1.15	0.34	mg/Kg wet	1.67		69.0	40-140			
2,6-Dinitrotoluene	1.20	0.34	mg/Kg wet	1.67		72.2	40-140			
Di-n-octylphthalate	1.26	0.34	mg/Kg wet	1.67		75.3	40-140			
1,2-Diphenylhydrazine/Azobenzene	1.25	0.34	mg/Kg wet	1.67		74.9	40-140			
Fluoranthene	1.20	0.17	mg/Kg wet	1.67		72.3	40-140			
Fluorene	1.16	0.17	mg/Kg wet	1.67		69.5	40-140			
Hexachlorobenzene	1.19	0.34	mg/Kg wet	1.67		71.1	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
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Batch B224909 - SW-846 3546

LCS (B224909-BS1)

Prepared: 03/04/19 Analyzed: 03/06/19

Hexachlorobutadiene	1.05	0.34	mg/Kg wet	1.67		62.9	40-140			
Hexachloroethane	1.05	0.34	mg/Kg wet	1.67		62.7	40-140			
Indeno(1,2,3-cd)pyrene	1.33	0.17	mg/Kg wet	1.67		79.8	40-140			
Isophorone	1.18	0.34	mg/Kg wet	1.67		71.0	40-140			
2-Methylnaphthalene	1.15	0.17	mg/Kg wet	1.67		68.9	40-140			
2-Methylphenol	1.10	0.34	mg/Kg wet	1.67		66.0	30-130			
3/4-Methylphenol	1.07	0.34	mg/Kg wet	1.67		64.2	30-130			
Naphthalene	1.10	0.17	mg/Kg wet	1.67		66.2	40-140			
Nitrobenzene	1.09	0.34	mg/Kg wet	1.67		65.6	40-140			
2-Nitrophenol	1.16	0.34	mg/Kg wet	1.67		69.5	30-130			
4-Nitrophenol	1.17	0.66	mg/Kg wet	1.67		70.3	15-140			†
Pentachlorophenol	1.20	0.34	mg/Kg wet	1.67		72.3	30-130			
Phenanthrene	1.22	0.17	mg/Kg wet	1.67		73.5	40-140			
Phenol	1.17	0.34	mg/Kg wet	1.67		70.4	15-140			†
Pyrene	1.24	0.17	mg/Kg wet	1.67		74.6	40-140			
1,2,4-Trichlorobenzene	1.06	0.34	mg/Kg wet	1.67		63.7	40-140			
2,4,5-Trichlorophenol	1.22	0.34	mg/Kg wet	1.67		73.1	30-130			
2,4,6-Trichlorophenol	1.22	0.34	mg/Kg wet	1.67		73.4	30-130			
Surrogate: 2-Fluorophenol	4.87		mg/Kg wet	6.67		73.0	30-130			
Surrogate: Phenol-d6	4.78		mg/Kg wet	6.67		71.7	30-130			
Surrogate: Nitrobenzene-d5	2.34		mg/Kg wet	3.33		70.2	30-130			
Surrogate: 2-Fluorobiphenyl	2.49		mg/Kg wet	3.33		74.6	30-130			
Surrogate: 2,4,6-Tribromophenol	5.37		mg/Kg wet	6.67		80.5	30-130			
Surrogate: p-Terphenyl-d14	2.73		mg/Kg wet	3.33		81.8	30-130			

LCS Dup (B224909-BS1)

Prepared: 03/04/19 Analyzed: 03/06/19

Acenaphthene	1.17	0.17	mg/Kg wet	1.67		70.4	40-140	3.64	30	
Acenaphthylene	1.16	0.17	mg/Kg wet	1.67		69.4	40-140	1.57	30	
Acetophenone	1.06	0.34	mg/Kg wet	1.67		63.6	40-140	0.568	30	
Aniline	0.545	0.34	mg/Kg wet	1.67		32.7 *	40-140	4.66	30	L-04, V-34
Anthracene	1.31	0.17	mg/Kg wet	1.67		78.6	40-140	6.43	30	
Benzo(a)anthracene	1.26	0.17	mg/Kg wet	1.67		75.7	40-140	7.97	30	
Benzo(a)pyrene	1.37	0.17	mg/Kg wet	1.67		82.4	40-140	6.93	30	
Benzo(b)fluoranthene	1.27	0.17	mg/Kg wet	1.67		76.2	40-140	6.23	30	
Benzo(g,h,i)perylene	1.47	0.17	mg/Kg wet	1.67		88.0	40-140	7.74	30	
Benzo(k)fluoranthene	1.30	0.17	mg/Kg wet	1.67		77.8	40-140	6.72	30	
Bis(2-chloroethoxy)methane	1.35	0.34	mg/Kg wet	1.67		80.8	40-140	0.471	30	
Bis(2-chloroethyl)ether	1.24	0.34	mg/Kg wet	1.67		74.5	40-140	2.36	30	
Bis(2-chloroisopropyl)ether	1.40	0.34	mg/Kg wet	1.67		84.2	40-140	1.89	30	
Bis(2-Ethylhexyl)phthalate	1.38	0.34	mg/Kg wet	1.67		82.8	40-140	7.75	30	
4-Bromophenylphenylether	1.33	0.34	mg/Kg wet	1.67		80.0	40-140	5.98	30	
Butylbenzylphthalate	1.39	0.34	mg/Kg wet	1.67		83.3	40-140	8.46	30	
4-Chloroaniline	0.553	0.66	mg/Kg wet	1.67		33.2	15-140	2.69	30	V-34 †
2-Chloronaphthalene	1.01	0.34	mg/Kg wet	1.67		60.4	40-140	3.95	30	
2-Chlorophenol	1.19	0.34	mg/Kg wet	1.67		71.2	30-130	2.91	30	
Chrysene	1.30	0.17	mg/Kg wet	1.67		78.0	40-140	6.73	30	
Dibenz(a,h)anthracene	1.39	0.17	mg/Kg wet	1.67		83.4	40-140	5.37	30	
Dibenzofuran	1.22	0.34	mg/Kg wet	1.67		73.3	40-140	5.38	30	
Di-n-butylphthalate	1.32	0.34	mg/Kg wet	1.67		79.1	40-140	7.29	30	
1,2-Dichlorobenzene	1.06	0.34	mg/Kg wet	1.67		63.7	40-140	2.74	30	
1,3-Dichlorobenzene	1.03	0.34	mg/Kg wet	1.67		61.7	40-140	1.34	30	
1,4-Dichlorobenzene	1.02	0.34	mg/Kg wet	1.67		61.4	40-140	0.261	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 B224909 - SW-846 3546**

**LCS Dup (B224909-BSD1)**

Prepared: 03/04/19 Analyzed: 03/06/19

3,3-Dichlorobenzidine	0.906	0.17	mg/Kg wet	1.67		54.4	40-140	6.34	30	
2,4-Dichlorophenol	1.23	0.34	mg/Kg wet	1.67		73.8	30-130	1.53	30	
Diethylphthalate	1.30	0.34	mg/Kg wet	1.67		77.9	40-140	7.35	30	
2,4-Dimethylphenol	1.14	0.34	mg/Kg wet	1.67		68.4	30-130	4.45	30	
Dimethylphthalate	1.30	0.34	mg/Kg wet	1.67		77.9	40-140	4.09	30	
2,4-Dinitrophenol	1.17	0.66	mg/Kg wet	1.67		70.3	15-140	8.63	30	†
2,4-Dinitrotoluene	1.25	0.34	mg/Kg wet	1.67		75.2	40-140	8.57	30	
2,6-Dinitrotoluene	1.28	0.34	mg/Kg wet	1.67		76.8	40-140	6.18	30	
Di-n-octylphthalate	1.38	0.34	mg/Kg wet	1.67		82.8	40-140	9.44	30	
1,2-Diphenylhydrazine/Azobenzene	1.31	0.34	mg/Kg wet	1.67		78.7	40-140	4.97	30	
Fluoranthene	1.30	0.17	mg/Kg wet	1.67		77.7	40-140	7.28	30	
Fluorene	1.23	0.17	mg/Kg wet	1.67		73.5	40-140	5.65	30	
Hexachlorobenzene	1.25	0.34	mg/Kg wet	1.67		75.0	40-140	5.23	30	
Hexachlorobutadiene	1.09	0.34	mg/Kg wet	1.67		65.5	40-140	3.96	30	
Hexachloroethane	1.03	0.34	mg/Kg wet	1.67		61.6	40-140	1.87	30	
Indeno(1,2,3-cd)pyrene	1.44	0.17	mg/Kg wet	1.67		86.5	40-140	8.08	30	
Isophorone	1.19	0.34	mg/Kg wet	1.67		71.2	40-140	0.338	30	
2-Methylnaphthalene	1.17	0.17	mg/Kg wet	1.67		69.9	40-140	1.47	30	
2-Methylphenol	1.14	0.34	mg/Kg wet	1.67		68.4	30-130	3.57	30	
3/4-Methylphenol	1.08	0.34	mg/Kg wet	1.67		65.0	30-130	1.21	30	
Naphthalene	1.14	0.17	mg/Kg wet	1.67		68.7	40-140	3.68	30	
Nitrobenzene	1.13	0.34	mg/Kg wet	1.67		68.0	40-140	3.59	30	
2-Nitrophenol	1.20	0.34	mg/Kg wet	1.67		71.7	30-130	3.12	30	
4-Nitrophenol	1.27	0.66	mg/Kg wet	1.67		76.4	15-140	8.32	30	†
Pentachlorophenol	1.28	0.34	mg/Kg wet	1.67		76.5	30-130	5.67	30	
Phenanthrene	1.32	0.17	mg/Kg wet	1.67		79.1	40-140	7.31	30	
Phenol	1.19	0.34	mg/Kg wet	1.67		71.3	15-140	1.16	30	†
Pyrene	1.33	0.17	mg/Kg wet	1.67		79.9	40-140	6.94	30	
1,2,4-Trichlorobenzene	1.09	0.34	mg/Kg wet	1.67		65.3	40-140	2.48	30	
2,4,5-Trichlorophenol	1.26	0.34	mg/Kg wet	1.67		75.3	30-130	2.96	30	
2,4,6-Trichlorophenol	1.26	0.34	mg/Kg wet	1.67		75.4	30-130	2.69	30	

Surrogate: 2-Fluorophenol	4.97		mg/Kg wet	6.67		74.5	30-130			
Surrogate: Phenol-d6	4.88		mg/Kg wet	6.67		73.2	30-130			
Surrogate: Nitrobenzene-d5	2.45		mg/Kg wet	3.33		73.6	30-130			
Surrogate: 2-Fluorobiphenyl	2.54		mg/Kg wet	3.33		76.2	30-130			
Surrogate: 2,4,6-Tribromophenol	5.78		mg/Kg wet	6.67		86.7	30-130			
Surrogate: p-Terphenyl-d14	2.92		mg/Kg wet	3.33		87.7	30-130			

**Matrix Spike (B224909-MS1)**

**Source: 19C0049-02**

Prepared: 03/04/19 Analyzed: 03/07/19

Acenaphthene	0.864	0.38	mg/Kg dry	1.85	ND	46.8	40-140			
Acenaphthylene	1.04	0.38	mg/Kg dry	1.85	ND	56.4	40-140			
Acetophenone	1.02	0.75	mg/Kg dry	1.85	ND	55.0	40-140			
<b>Aniline</b>	0.362	0.75	mg/Kg dry	1.85	ND	<b>19.6</b>	* 40-140			MS-09
Anthracene	1.09	0.38	mg/Kg dry	1.85	ND	59.0	40-140			
Benzo(a)anthracene	1.42	0.38	mg/Kg dry	1.85	0.503	49.7	40-140			
Benzo(a)pyrene	1.45	0.38	mg/Kg dry	1.85	0.576	47.3	40-140			
Benzo(b)fluoranthene	1.50	0.38	mg/Kg dry	1.85	0.669	45.0	40-140			
Benzo(g,h,i)perylene	1.18	0.38	mg/Kg dry	1.85	0.431	40.4	40-140			
Benzo(k)fluoranthene	1.22	0.38	mg/Kg dry	1.85	0.253	52.1	40-140			
Bis(2-chloroethoxy)methane	1.07	0.75	mg/Kg dry	1.85	ND	57.7	40-140			
Bis(2-chloroethyl)ether	1.05	0.75	mg/Kg dry	1.85	ND	56.8	40-140			
Bis(2-chloroisopropyl)ether	1.10	0.75	mg/Kg dry	1.85	ND	59.3	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
<b>Batch B224909 - SW-846 3546</b>										
<b>Matrix Spike (B224909-MS1)</b>	<b>Source: 19C0049-02</b>			Prepared: 03/04/19 Analyzed: 03/07/19						
Bis(2-Ethylhexyl)phthalate	1.36	0.75	mg/Kg dry	1.85	ND	73.4	40-140			
4-Bromophenylphenylether	0.932	0.75	mg/Kg dry	1.85	ND	50.4	40-140			
Butylbenzylphthalate	1.35	0.75	mg/Kg dry	1.85	ND	73.0	40-140			
<b>4-Chloroaniline</b>	0.505	1.5	mg/Kg dry	1.85	ND	<b>27.4</b>	* 40-140			MS-09, V-34
2-Chloronaphthalene	0.755	0.75	mg/Kg dry	1.85	ND	40.9	40-140			
2-Chlorophenol	0.991	0.75	mg/Kg dry	1.85	ND	53.6	30-130			
Chrysene	1.44	0.38	mg/Kg dry	1.85	0.567	47.3	40-140			
Dibenz(a,h)anthracene	0.945	0.38	mg/Kg dry	1.85	ND	51.2	40-140			
Dibenzofuran	0.933	0.75	mg/Kg dry	1.85	ND	50.5	40-140			
Di-n-butylphthalate	1.12	0.75	mg/Kg dry	1.85	ND	60.5	40-140			
1,2-Dichlorobenzene	0.899	0.75	mg/Kg dry	1.85	ND	48.6	40-140			
1,3-Dichlorobenzene	0.877	0.75	mg/Kg dry	1.85	ND	47.5	40-140			
1,4-Dichlorobenzene	0.913	0.75	mg/Kg dry	1.85	ND	49.4	40-140			
<b>3,3-Dichlorobenzidine</b>	0.491	0.38	mg/Kg dry	1.85	ND	<b>26.6</b>	* 40-140			MS-09
2,4-Dichlorophenol	0.943	0.75	mg/Kg dry	1.85	ND	51.0	30-130			
Diethylphthalate	1.00	0.75	mg/Kg dry	1.85	ND	54.2	40-140			
2,4-Dimethylphenol	0.859	0.75	mg/Kg dry	1.85	ND	46.5	30-130			
Dimethylphthalate	0.934	0.75	mg/Kg dry	1.85	ND	50.6	40-140			
<b>2,4-Dinitrophenol</b>	0.495		mg/Kg dry	1.85	0.00	<b>26.8</b>	* 30-130			MS-09, V-05
2,4-Dinitrotoluene	0.966	0.75	mg/Kg dry	1.85	ND	52.3	40-140			
2,6-Dinitrotoluene	0.992	0.75	mg/Kg dry	1.85	ND	53.7	40-140			
Di-n-octylphthalate	1.46	0.75	mg/Kg dry	1.85	ND	78.9	40-140			
1,2-Diphenylhydrazine/Azobenzene	1.08	0.75	mg/Kg dry	1.85	ND	58.5	40-140			
Fluoranthene	1.90	0.38	mg/Kg dry	1.85	0.892	54.7	40-140			
Fluorene	0.974	0.38	mg/Kg dry	1.85	ND	52.7	40-140			
Hexachlorobenzene	0.985	0.75	mg/Kg dry	1.85	ND	53.3	40-140			
Hexachlorobutadiene	0.905	0.75	mg/Kg dry	1.85	ND	49.0	40-140			
Hexachloroethane	0.876	0.75	mg/Kg dry	1.85	ND	47.4	40-140			
Indeno(1,2,3-cd)pyrene	1.22	0.38	mg/Kg dry	1.85	0.437	42.4	40-140			
Isophorone	1.09	0.75	mg/Kg dry	1.85	ND	58.9	40-140			
2-Methylnaphthalene	1.06	0.38	mg/Kg dry	1.85	ND	57.5	40-140			
2-Methylphenol	0.924	0.75	mg/Kg dry	1.85	ND	50.0	30-130			
3/4-Methylphenol	1.03	0.75	mg/Kg dry	1.85	ND	55.6	30-130			
Naphthalene	0.950	0.38	mg/Kg dry	1.85	ND	51.4	40-140			
Nitrobenzene	1.02	0.75	mg/Kg dry	1.85	ND	55.0	40-140			
2-Nitrophenol	0.931	0.75	mg/Kg dry	1.85	ND	50.4	30-130			
4-Nitrophenol	1.26	1.5	mg/Kg dry	1.85	ND	68.4	30-130			
<b>Pentachlorophenol</b>	0.474	0.75	mg/Kg dry	1.85	ND	<b>25.6</b>	* 30-130			MS-09
Phenanthrene	1.48	0.38	mg/Kg dry	1.85	0.405	58.1	40-140			
Phenol	1.07	0.75	mg/Kg dry	1.85	ND	57.8	30-130			
Pyrene	2.22	0.38	mg/Kg dry	1.85	1.10	60.4	40-140			
1,2,4-Trichlorobenzene	0.916	0.75	mg/Kg dry	1.85	ND	49.6	40-140			
2,4,5-Trichlorophenol	0.887	0.75	mg/Kg dry	1.85	ND	48.0	30-130			
2,4,6-Trichlorophenol	0.899	0.75	mg/Kg dry	1.85	ND	48.7	30-130			
Surrogate: 2-Fluorophenol	4.11		mg/Kg dry	7.39		55.6	30-130			
Surrogate: Phenol-d6	4.49		mg/Kg dry	7.39		60.7	30-130			
Surrogate: Nitrobenzene-d5	2.17		mg/Kg dry	3.69		58.8	30-130			
Surrogate: 2-Fluorobiphenyl	1.95		mg/Kg dry	3.69		52.8	30-130			
Surrogate: 2,4,6-Tribromophenol	4.26		mg/Kg dry	7.39		57.6	30-130			
Surrogate: p-Terphenyl-d14	2.67		mg/Kg dry	3.69		72.2	30-130			

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
<b>Batch B224909 - SW-846 3546</b>										
<b>Matrix Spike Dup (B224909-MSD1)</b>										
Source: 19C0049-02 Prepared: 03/04/19 Analyzed: 03/07/19										
Acenaphthene	0.887	0.38	mg/Kg dry	1.84	ND	48.2	40-140	2.62	30	
Acenaphthylene	1.07	0.38	mg/Kg dry	1.84	ND	58.2	40-140	2.74	30	
Acetophenone	1.04	0.75	mg/Kg dry	1.84	ND	56.2	40-140	1.83	30	
<b>Aniline</b>	0.439	0.75	mg/Kg dry	1.84	ND	<b>23.8</b>	* 40-140	19.2	30	MS-09
Anthracene	1.09	0.38	mg/Kg dry	1.84	ND	59.0	40-140	0.398	30	
Benzo(a)anthracene	1.46	0.38	mg/Kg dry	1.84	0.503	51.8	40-140	2.44	30	
Benzo(a)pyrene	1.46	0.38	mg/Kg dry	1.84	0.576	48.1	40-140	0.784	30	
Benzo(b)fluoranthene	1.51	0.38	mg/Kg dry	1.84	0.669	45.9	40-140	0.893	30	
<b>Benzo(g,h,i)perylene</b>	1.13	0.38	mg/Kg dry	1.84	0.431	<b>38.1</b>	* 40-140	3.84	30	MS-22
Benzo(k)fluoranthene	1.12	0.38	mg/Kg dry	1.84	0.253	47.3	40-140	7.77	30	
Bis(2-chloroethoxy)methane	1.03	0.75	mg/Kg dry	1.84	ND	56.0	40-140	3.21	30	
Bis(2-chloroethyl)ether	1.01	0.75	mg/Kg dry	1.84	ND	55.1	40-140	3.26	30	
Bis(2-chloroisopropyl)ether	1.07	0.75	mg/Kg dry	1.84	ND	58.2	40-140	2.17	30	
Bis(2-Ethylhexyl)phthalate	1.42	0.75	mg/Kg dry	1.84	ND	77.2	40-140	4.82	30	
4-Bromophenylphenylether	0.954	0.75	mg/Kg dry	1.84	ND	51.8	40-140	2.33	30	
Butylbenzylphthalate	1.44	0.75	mg/Kg dry	1.84	ND	78.3	40-140	6.70	30	
<b>4-Chloroaniline</b>	0.504	1.5	mg/Kg dry	1.84	ND	<b>27.4</b>	* 40-140	0.184	30	MS-09, V-34
2-Chloronaphthalene	0.879	0.75	mg/Kg dry	1.84	ND	47.7	40-140	15.1	30	
2-Chlorophenol	1.05	0.75	mg/Kg dry	1.84	ND	56.8	30-130	5.32	30	
Chrysene	1.42	0.38	mg/Kg dry	1.84	0.567	46.4	40-140	1.46	30	
Dibenz(a,h)anthracene	0.921	0.38	mg/Kg dry	1.84	ND	50.0	40-140	2.54	30	
Dibenzofuran	0.966	0.75	mg/Kg dry	1.84	ND	52.4	40-140	3.48	30	
Di-n-butylphthalate	1.11	0.75	mg/Kg dry	1.84	ND	60.5	40-140	0.331	30	
1,2-Dichlorobenzene	0.922	0.75	mg/Kg dry	1.84	ND	50.1	40-140	2.59	30	
1,3-Dichlorobenzene	0.888	0.75	mg/Kg dry	1.84	ND	48.2	40-140	1.26	30	
1,4-Dichlorobenzene	0.888	0.75	mg/Kg dry	1.84	ND	48.2	40-140	2.71	30	
<b>3,3-Dichlorobenzidine</b>	0.522	0.38	mg/Kg dry	1.84	ND	<b>28.4</b>	* 40-140	6.07	30	MS-09
2,4-Dichlorophenol	0.975	0.75	mg/Kg dry	1.84	ND	53.0	30-130	3.36	30	
Diethylphthalate	1.05	0.75	mg/Kg dry	1.84	ND	57.0	40-140	4.70	30	
2,4-Dimethylphenol	0.872	0.75	mg/Kg dry	1.84	ND	47.4	30-130	1.54	30	
Dimethylphthalate	0.980	0.75	mg/Kg dry	1.84	ND	53.2	40-140	4.76	30	
<b>2,4-Dinitrophenol</b>	0.463	1.5	mg/Kg dry	1.84	ND	<b>25.2</b>	* 30-130		30	MS-09, V-05
2,4-Dinitrotoluene	0.996	0.75	mg/Kg dry	1.84	ND	54.1	40-140	3.13	30	
2,6-Dinitrotoluene	1.02	0.75	mg/Kg dry	1.84	ND	55.2	40-140	2.53	30	
Di-n-octylphthalate	1.36	0.75	mg/Kg dry	1.84	ND	73.7	40-140	7.09	30	
1,2-Diphenylhydrazine/Azobenzene	1.07	0.75	mg/Kg dry	1.84	ND	58.1	40-140	0.948	30	
Fluoranthene	1.87	0.38	mg/Kg dry	1.84	0.892	53.0	40-140	1.86	30	
Fluorene	1.01	0.38	mg/Kg dry	1.84	ND	55.1	40-140	4.12	30	
Hexachlorobenzene	0.973	0.75	mg/Kg dry	1.84	ND	52.8	40-140	1.23	30	
Hexachlorobutadiene	0.899	0.75	mg/Kg dry	1.84	ND	48.8	40-140	0.740	30	
Hexachloroethane	0.811	0.75	mg/Kg dry	1.84	ND	44.0	40-140	7.76	30	
Indeno(1,2,3-cd)pyrene	1.17	0.38	mg/Kg dry	1.84	0.437	40.0	40-140	3.97	30	MS-22
Isophorone	1.08	0.75	mg/Kg dry	1.84	ND	58.6	40-140	0.739	30	
2-Methylnaphthalene	1.05	0.38	mg/Kg dry	1.84	ND	57.2	40-140	0.819	30	
2-Methylphenol	0.986	0.75	mg/Kg dry	1.84	ND	53.6	30-130	6.47	30	
3/4-Methylphenol	1.06	0.75	mg/Kg dry	1.84	ND	57.8	30-130	3.41	30	
Naphthalene	0.957	0.38	mg/Kg dry	1.84	ND	52.0	40-140	0.830	30	
Nitrobenzene	1.01	0.75	mg/Kg dry	1.84	ND	54.6	40-140	1.06	30	
2-Nitrophenol	0.918	0.75	mg/Kg dry	1.84	ND	49.8	30-130	1.45	30	
4-Nitrophenol	1.15	1.5	mg/Kg dry	1.84	ND	62.7	30-130	8.99	30	
<b>Pentachlorophenol</b>	0.476	0.75	mg/Kg dry	1.84	ND	<b>25.8</b>	* 30-130		30	MS-09
Phenanthrene	1.44	0.38	mg/Kg dry	1.84	0.405	56.5	40-140	2.30	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 B224909 - SW-846 3546**

**Matrix Spike Dup (B224909-MSD1)**

**Source: 19C0049-02**

Prepared: 03/04/19 Analyzed: 03/07/19

Phenol	1.03	0.75	mg/Kg dry	1.84	ND	55.9	30-130	3.71	30	
Pyrene	2.30	0.38	mg/Kg dry	1.84	1.10	65.5	40-140	3.95	30	
1,2,4-Trichlorobenzene	0.915	0.75	mg/Kg dry	1.84	ND	49.7	40-140	0.169	30	
2,4,5-Trichlorophenol	0.889	0.75	mg/Kg dry	1.84	ND	48.3	30-130	0.251	30	
2,4,6-Trichlorophenol	0.918	0.75	mg/Kg dry	1.84	ND	49.9	30-130	2.10	30	
Surrogate: 2-Fluorophenol	4.11		mg/Kg dry	7.36		55.9	30-130			
Surrogate: Phenol-d6	4.38		mg/Kg dry	7.36		59.5	30-130			
Surrogate: Nitrobenzene-d5	2.18		mg/Kg dry	3.68		59.1	30-130			
Surrogate: 2-Fluorobiphenyl	2.02		mg/Kg dry	3.68		54.9	30-130			
Surrogate: 2,4,6-Tribromophenol	4.13		mg/Kg dry	7.36		56.1	30-130			
Surrogate: p-Terphenyl-d14	2.85		mg/Kg dry	3.68		77.3	30-130			

**Batch B224911 - SW-846 3546**

**Blank (B224911-BLK1)**

Prepared: 03/04/19 Analyzed: 03/05/19

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							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							
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							V-20
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							
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							
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							
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							
2,4-Dinitrophenol	ND	0.66	mg/Kg wet							
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							
1,2-Diphenylhydrazine/Azobenzene	ND	0.34	mg/Kg wet							V-20
Fluoranthene	ND	0.17	mg/Kg wet							
Fluorene	ND	0.17	mg/Kg wet							

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
<b>Batch B224911 - SW-846 3546</b>										
<b>Blank (B224911-BLK1)</b>										
Prepared: 03/04/19 Analyzed: 03/05/19										
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							V-20
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							V-20
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							
Phenol	ND	0.34	mg/Kg wet							V-20
Pyrene	ND	0.17	mg/Kg wet							
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	6.39		mg/Kg wet	6.67		95.8	30-130			
Surrogate: Phenol-d6	6.63		mg/Kg wet	6.67		99.5	30-130			
Surrogate: Nitrobenzene-d5	3.44		mg/Kg wet	3.33		103	30-130			
Surrogate: 2-Fluorobiphenyl	3.04		mg/Kg wet	3.33		91.3	30-130			
Surrogate: 2,4,6-Tribromophenol	5.73		mg/Kg wet	6.67		86.0	30-130			
Surrogate: p-Terphenyl-d14	3.42		mg/Kg wet	3.33		103	30-130			
<b>LCS (B224911-BS1)</b>										
Prepared: 03/04/19 Analyzed: 03/05/19										
Acenaphthene	1.29	0.17	mg/Kg wet	1.67		77.5	40-140			
Acenaphthylene	1.28	0.17	mg/Kg wet	1.67		76.7	40-140			
Acetophenone	1.38	0.34	mg/Kg wet	1.67		82.7	40-140			
Aniline	0.700	0.34	mg/Kg wet	1.67		42.0	40-140			V-34
Anthracene	1.44	0.17	mg/Kg wet	1.67		86.2	40-140			
Benzo(a)anthracene	1.30	0.17	mg/Kg wet	1.67		78.2	40-140			
Benzo(a)pyrene	1.41	0.17	mg/Kg wet	1.67		84.7	40-140			
Benzo(b)fluoranthene	1.38	0.17	mg/Kg wet	1.67		82.6	40-140			
Benzo(g,h,i)perylene	1.35	0.17	mg/Kg wet	1.67		80.8	40-140			
Benzo(k)fluoranthene	1.41	0.17	mg/Kg wet	1.67		84.5	40-140			
Bis(2-chloroethoxy)methane	1.72	0.34	mg/Kg wet	1.67		103	40-140			
Bis(2-chloroethyl)ether	1.57	0.34	mg/Kg wet	1.67		94.4	40-140			V-06
Bis(2-chloroisopropyl)ether	1.67	0.34	mg/Kg wet	1.67		100	40-140			
Bis(2-Ethylhexyl)phthalate	1.63	0.34	mg/Kg wet	1.67		97.8	40-140			
4-Bromophenylphenylether	1.33	0.34	mg/Kg wet	1.67		79.6	40-140			
Butylbenzylphthalate	1.59	0.34	mg/Kg wet	1.67		95.6	40-140			
4-Chloroaniline	0.641	0.66	mg/Kg wet	1.67		38.4	15-140			V-34 †
2-Chloronaphthalene	1.19	0.34	mg/Kg wet	1.67		71.4	40-140			
2-Chlorophenol	1.31	0.34	mg/Kg wet	1.67		78.6	30-130			
Chrysene	1.36	0.17	mg/Kg wet	1.67		81.7	40-140			
Dibenz(a,h)anthracene	1.20	0.17	mg/Kg wet	1.67		72.3	40-140			
Dibenzofuran	1.29	0.34	mg/Kg wet	1.67		77.6	40-140			
Di-n-butylphthalate	1.51	0.34	mg/Kg wet	1.67		90.5	40-140			
1,2-Dichlorobenzene	1.18	0.34	mg/Kg wet	1.67		70.7	40-140			
1,3-Dichlorobenzene	1.15	0.34	mg/Kg wet	1.67		69.1	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
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**Batch B224911 - SW-846 3546**

**LCS (B224911-BS1)**

Prepared: 03/04/19 Analyzed: 03/05/19

1,4-Dichlorobenzene	1.16	0.34	mg/Kg wet	1.67		69.5	40-140			
3,3-Dichlorobenzidine	0.823	0.17	mg/Kg wet	1.67		49.4	40-140			
2,4-Dichlorophenol	1.18	0.34	mg/Kg wet	1.67		70.7	30-130			
Diethylphthalate	1.38	0.34	mg/Kg wet	1.67		82.6	40-140			
2,4-Dimethylphenol	1.34	0.34	mg/Kg wet	1.67		80.6	30-130			
Dimethylphthalate	1.36	0.34	mg/Kg wet	1.67		81.4	40-140			
2,4-Dinitrophenol	0.979	0.66	mg/Kg wet	1.67		58.8	15-140			†
2,4-Dinitrotoluene	1.31	0.34	mg/Kg wet	1.67		78.4	40-140			
2,6-Dinitrotoluene	1.34	0.34	mg/Kg wet	1.67		80.3	40-140			
Di-n-octylphthalate	1.56	0.34	mg/Kg wet	1.67		93.6	40-140			
1,2-Diphenylhydrazine/Azobenzene	1.77	0.34	mg/Kg wet	1.67		106	40-140			V-06
Fluoranthene	1.38	0.17	mg/Kg wet	1.67		82.8	40-140			
Fluorene	1.32	0.17	mg/Kg wet	1.67		79.2	40-140			
Hexachlorobenzene	1.27	0.34	mg/Kg wet	1.67		76.2	40-140			
Hexachlorobutadiene	1.12	0.34	mg/Kg wet	1.67		67.1	40-140			
Hexachloroethane	1.25	0.34	mg/Kg wet	1.67		75.2	40-140			
Indeno(1,2,3-cd)pyrene	1.32	0.17	mg/Kg wet	1.67		79.1	40-140			
Isophorone	1.53	0.34	mg/Kg wet	1.67		91.6	40-140			V-06
2-Methylnaphthalene	1.28	0.17	mg/Kg wet	1.67		76.6	40-140			
2-Methylphenol	1.38	0.34	mg/Kg wet	1.67		82.5	30-130			
3/4-Methylphenol	1.35	0.34	mg/Kg wet	1.67		80.9	30-130			
Naphthalene	1.29	0.17	mg/Kg wet	1.67		77.2	40-140			
Nitrobenzene	1.46	0.34	mg/Kg wet	1.67		87.7	40-140			V-06
2-Nitrophenol	1.32	0.34	mg/Kg wet	1.67		79.5	30-130			
4-Nitrophenol	1.35	0.66	mg/Kg wet	1.67		80.9	15-140			†
Pentachlorophenol	1.38	0.34	mg/Kg wet	1.67		82.6	30-130			
Phenanthrene	1.42	0.17	mg/Kg wet	1.67		85.2	40-140			
Phenol	1.42	0.34	mg/Kg wet	1.67		85.4	15-140			V-06 †
Pyrene	1.45	0.17	mg/Kg wet	1.67		87.0	40-140			
1,2,4-Trichlorobenzene	1.18	0.34	mg/Kg wet	1.67		70.6	40-140			
2,4,5-Trichlorophenol	1.23	0.34	mg/Kg wet	1.67		73.5	30-130			
2,4,6-Trichlorophenol	1.28	0.34	mg/Kg wet	1.67		76.6	30-130			
Surrogate: 2-Fluorophenol	5.77		mg/Kg wet	6.67		86.5	30-130			
Surrogate: Phenol-d6	5.93		mg/Kg wet	6.67		88.9	30-130			
Surrogate: Nitrobenzene-d5	3.12		mg/Kg wet	3.33		93.7	30-130			
Surrogate: 2-Fluorobiphenyl	2.81		mg/Kg wet	3.33		84.4	30-130			
Surrogate: 2,4,6-Tribromophenol	5.53		mg/Kg wet	6.67		82.9	30-130			
Surrogate: p-Terphenyl-d14	3.00		mg/Kg wet	3.33		90.0	30-130			

**LCS Dup (B224911-BS1)**

Prepared: 03/04/19 Analyzed: 03/05/19

Acenaphthene	1.26	0.17	mg/Kg wet	1.67		75.4	40-140	2.77	30	
Acenaphthylene	1.24	0.17	mg/Kg wet	1.67		74.5	40-140	2.94	30	
Acetophenone	1.33	0.34	mg/Kg wet	1.67		80.0	40-140	3.37	30	
<b>Aniline</b>	0.654	0.34	mg/Kg wet	1.67		39.2 *	40-140	6.80	30	L-07, V-34
Anthracene	1.43	0.17	mg/Kg wet	1.67		85.6	40-140	0.699	30	
Benzo(a)anthracene	1.29	0.17	mg/Kg wet	1.67		77.6	40-140	0.668	30	
Benzo(a)pyrene	1.43	0.17	mg/Kg wet	1.67		86.0	40-140	1.59	30	
Benzo(b)fluoranthene	1.38	0.17	mg/Kg wet	1.67		82.9	40-140	0.387	30	
Benzo(g,h,i)perylene	1.43	0.17	mg/Kg wet	1.67		86.1	40-140	6.28	30	
Benzo(k)fluoranthene	1.40	0.17	mg/Kg wet	1.67		83.8	40-140	0.855	30	
Bis(2-chloroethoxy)methane	1.61	0.34	mg/Kg wet	1.67		96.7	40-140	6.35	30	
Bis(2-chloroethyl)ether	1.47	0.34	mg/Kg wet	1.67		88.3	40-140	6.63	30	V-06

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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
<b>Batch B224911 - SW-846 3546</b>										
<b>LCS Dup (B224911-BSD1)</b>										
					Prepared: 03/04/19 Analyzed: 03/05/19					
Bis(2-chloroisopropyl)ether	1.57	0.34	mg/Kg wet	1.67		94.5	40-140	5.76	30	
Bis(2-Ethylhexyl)phthalate	1.62	0.34	mg/Kg wet	1.67		97.0	40-140	0.842	30	
4-Bromophenylphenylether	1.33	0.34	mg/Kg wet	1.67		79.9	40-140	0.276	30	
Butylbenzylphthalate	1.60	0.34	mg/Kg wet	1.67		96.2	40-140	0.626	30	
4-Chloroaniline	0.621	0.66	mg/Kg wet	1.67		37.2	15-140	3.17	30	V-34 †
2-Chloronaphthalene	1.16	0.34	mg/Kg wet	1.67		69.6	40-140	2.44	30	
2-Chlorophenol	1.26	0.34	mg/Kg wet	1.67		75.3	30-130	4.29	30	
Chrysene	1.37	0.17	mg/Kg wet	1.67		82.0	40-140	0.318	30	
Dibenz(a,h)anthracene	1.29	0.17	mg/Kg wet	1.67		77.2	40-140	6.63	30	
Dibenzofuran	1.26	0.34	mg/Kg wet	1.67		75.8	40-140	2.40	30	
Di-n-butylphthalate	1.50	0.34	mg/Kg wet	1.67		89.7	40-140	0.844	30	
1,2-Dichlorobenzene	1.15	0.34	mg/Kg wet	1.67		68.9	40-140	2.55	30	
1,3-Dichlorobenzene	1.13	0.34	mg/Kg wet	1.67		68.0	40-140	1.60	30	
1,4-Dichlorobenzene	1.13	0.34	mg/Kg wet	1.67		68.1	40-140	2.06	30	
3,3-Dichlorobenzidine	0.816	0.17	mg/Kg wet	1.67		48.9	40-140	0.895	30	
2,4-Dichlorophenol	1.19	0.34	mg/Kg wet	1.67		71.1	30-130	0.592	30	
Diethylphthalate	1.38	0.34	mg/Kg wet	1.67		82.6	40-140	0.0243	30	
2,4-Dimethylphenol	1.28	0.34	mg/Kg wet	1.67		76.7	30-130	4.98	30	
Dimethylphthalate	1.34	0.34	mg/Kg wet	1.67		80.6	40-140	0.987	30	
2,4-Dinitrophenol	1.08	0.66	mg/Kg wet	1.67		64.6	15-140	9.47	30	†
2,4-Dinitrotoluene	1.29	0.34	mg/Kg wet	1.67		77.6	40-140	0.949	30	
2,6-Dinitrotoluene	1.35	0.34	mg/Kg wet	1.67		81.2	40-140	1.07	30	
Di-n-octylphthalate	1.56	0.34	mg/Kg wet	1.67		93.8	40-140	0.192	30	
1,2-Diphenylhydrazine/Azobenzene	1.69	0.34	mg/Kg wet	1.67		102	40-140	4.45	30	V-06
Fluoranthene	1.38	0.17	mg/Kg wet	1.67		82.9	40-140	0.145	30	
Fluorene	1.30	0.17	mg/Kg wet	1.67		78.2	40-140	1.24	30	
Hexachlorobenzene	1.25	0.34	mg/Kg wet	1.67		75.2	40-140	1.32	30	
Hexachlorobutadiene	1.08	0.34	mg/Kg wet	1.67		64.6	40-140	3.86	30	
Hexachloroethane	1.22	0.34	mg/Kg wet	1.67		73.3	40-140	2.45	30	
Indeno(1,2,3-cd)pyrene	1.38	0.17	mg/Kg wet	1.67		82.9	40-140	4.72	30	
Isophorone	1.42	0.34	mg/Kg wet	1.67		85.4	40-140	6.94	30	V-06
2-Methylnaphthalene	1.25	0.17	mg/Kg wet	1.67		75.0	40-140	2.09	30	
2-Methylphenol	1.34	0.34	mg/Kg wet	1.67		80.2	30-130	2.90	30	
3/4-Methylphenol	1.28	0.34	mg/Kg wet	1.67		76.5	30-130	5.61	30	
Naphthalene	1.24	0.17	mg/Kg wet	1.67		74.1	40-140	4.04	30	
Nitrobenzene	1.38	0.34	mg/Kg wet	1.67		83.1	40-140	5.41	30	V-06
2-Nitrophenol	1.30	0.34	mg/Kg wet	1.67		78.0	30-130	1.88	30	
4-Nitrophenol	1.36	0.66	mg/Kg wet	1.67		81.8	15-140	1.08	30	†
Pentachlorophenol	1.43	0.34	mg/Kg wet	1.67		85.6	30-130	3.52	30	
Phenanthrene	1.42	0.17	mg/Kg wet	1.67		85.0	40-140	0.235	30	
Phenol	1.37	0.34	mg/Kg wet	1.67		82.4	15-140	3.55	30	V-06 †
Pyrene	1.44	0.17	mg/Kg wet	1.67		86.7	40-140	0.322	30	
1,2,4-Trichlorobenzene	1.13	0.34	mg/Kg wet	1.67		67.9	40-140	3.90	30	
2,4,5-Trichlorophenol	1.24	0.34	mg/Kg wet	1.67		74.3	30-130	1.08	30	
2,4,6-Trichlorophenol	1.30	0.34	mg/Kg wet	1.67		78.2	30-130	2.09	30	
Surrogate: 2-Fluorophenol	5.54		mg/Kg wet	6.67		83.1	30-130			
Surrogate: Phenol-d6	5.62		mg/Kg wet	6.67		84.4	30-130			
Surrogate: Nitrobenzene-d5	2.94		mg/Kg wet	3.33		88.3	30-130			
Surrogate: 2-Fluorobiphenyl	2.72		mg/Kg wet	3.33		81.5	30-130			
Surrogate: 2,4,6-Tribromophenol	5.52		mg/Kg wet	6.67		82.8	30-130			
Surrogate: p-Terphenyl-d14	3.02		mg/Kg wet	3.33		90.5	30-130			

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
<b>Batch B224911 - SW-846 3546</b>										
<b>Matrix Spike (B224911-MS1)</b>	<b>Source: 19C0049-22</b>			Prepared: 03/04/19 Analyzed: 03/05/19						
Acenaphthene	1.03	0.20	mg/Kg dry	1.92	ND	53.8	40-140			
Acenaphthylene	1.18	0.20	mg/Kg dry	1.92	0.163	53.0	40-140			
Acetophenone	1.13	0.39	mg/Kg dry	1.92	ND	58.8	40-140			
<b>Aniline</b>	0.396	0.39	mg/Kg dry	1.92	ND	<b>20.6</b> *	40-140			MS-09, V-34
Anthracene	1.20	0.20	mg/Kg dry	1.92	0.117	56.6	40-140			
Benzo(a)anthracene	1.47	0.20	mg/Kg dry	1.92	0.490	51.3	40-140			
Benzo(a)pyrene	1.60	0.20	mg/Kg dry	1.92	0.529	55.9	40-140			
Benzo(b)fluoranthene	1.53	0.20	mg/Kg dry	1.92	0.604	48.1	40-140			
Benzo(g,h,i)perylene	1.58	0.20	mg/Kg dry	1.92	0.251	69.2	40-140			
Benzo(k)fluoranthene	1.29	0.20	mg/Kg dry	1.92	0.259	53.8	40-140			
Bis(2-chloroethoxy)methane	1.44	0.39	mg/Kg dry	1.92	ND	74.9	40-140			
Bis(2-chloroethyl)ether	1.28	0.39	mg/Kg dry	1.92	ND	66.8	40-140			V-06
Bis(2-chloroisopropyl)ether	1.35	0.39	mg/Kg dry	1.92	ND	70.3	40-140			
Bis(2-Ethylhexyl)phthalate	1.47	0.39	mg/Kg dry	1.92	ND	76.3	40-140			
4-Bromophenylphenylether	1.03	0.39	mg/Kg dry	1.92	ND	53.8	40-140			
Butylbenzylphthalate	1.52	0.39	mg/Kg dry	1.92	ND	79.3	40-140			
<b>4-Chloroaniline</b>	0.540	0.76	mg/Kg dry	1.92	ND	<b>28.1</b> *	40-140			MS-09, V-34
2-Chloronaphthalene	0.940	0.39	mg/Kg dry	1.92	ND	49.0	40-140			
2-Chlorophenol	1.05	0.39	mg/Kg dry	1.92	ND	54.5	30-130			
Chrysene	1.52	0.20	mg/Kg dry	1.92	0.559	50.2	40-140			
Dibenz(a,h)anthracene	1.06	0.20	mg/Kg dry	1.92	ND	55.0	40-140			
Dibenzofuran	1.08	0.39	mg/Kg dry	1.92	ND	56.2	40-140			
Di-n-butylphthalate	1.20	0.39	mg/Kg dry	1.92	ND	62.5	40-140			
1,2-Dichlorobenzene	0.990	0.39	mg/Kg dry	1.92	ND	51.6	40-140			
1,3-Dichlorobenzene	0.966	0.39	mg/Kg dry	1.92	ND	50.3	40-140			
1,4-Dichlorobenzene	0.970	0.39	mg/Kg dry	1.92	ND	50.5	40-140			
<b>3,3-Dichlorobenzidine</b>	0.457	0.20	mg/Kg dry	1.92	ND	<b>23.8</b> *	40-140			MS-09
2,4-Dichlorophenol	0.971	0.39	mg/Kg dry	1.92	ND	50.6	30-130			
Diethylphthalate	1.11	0.39	mg/Kg dry	1.92	ND	57.7	40-140			
2,4-Dimethylphenol	1.24	0.39	mg/Kg dry	1.92	ND	64.6	30-130			
Dimethylphthalate	1.10	0.39	mg/Kg dry	1.92	ND	57.4	40-140			
<b>2,4-Dinitrophenol</b>	0.278	0.76	mg/Kg dry	1.92	ND	<b>14.5</b> *	30-130			MS-09
2,4-Dinitrotoluene	0.992	0.39	mg/Kg dry	1.92	ND	51.7	40-140			
2,6-Dinitrotoluene	1.08	0.39	mg/Kg dry	1.92	ND	56.3	40-140			
Di-n-octylphthalate	1.25	0.39	mg/Kg dry	1.92	ND	65.3	40-140			
1,2-Diphenylhydrazine/Azobenzene	1.34	0.39	mg/Kg dry	1.92	ND	70.1	40-140			V-06
Fluoranthene	2.01	0.20	mg/Kg dry	1.92	0.798	63.4	40-140			
Fluorene	1.13	0.20	mg/Kg dry	1.92	ND	58.8	40-140			
Hexachlorobenzene	0.924	0.39	mg/Kg dry	1.92	ND	48.1	40-140			
Hexachlorobutadiene	0.943	0.39	mg/Kg dry	1.92	ND	49.1	40-140			
Hexachloroethane	1.02	0.39	mg/Kg dry	1.92	ND	53.2	40-140			
Indeno(1,2,3-cd)pyrene	1.41	0.20	mg/Kg dry	1.92	0.246	60.8	40-140			
Isophorone	1.26	0.39	mg/Kg dry	1.92	ND	65.9	40-140			V-06
2-Methylnaphthalene	1.09	0.20	mg/Kg dry	1.92	ND	57.0	40-140			
2-Methylphenol	1.13	0.39	mg/Kg dry	1.92	ND	59.1	30-130			
3/4-Methylphenol	1.07	0.39	mg/Kg dry	1.92	ND	55.9	30-130			
Naphthalene	1.12	0.20	mg/Kg dry	1.92	ND	58.2	40-140			
Nitrobenzene	1.23	0.39	mg/Kg dry	1.92	ND	64.0	40-140			V-06
2-Nitrophenol	1.11	0.39	mg/Kg dry	1.92	ND	57.6	30-130			
4-Nitrophenol	1.03	0.76	mg/Kg dry	1.92	ND	53.7	30-130			
Pentachlorophenol	0.646	0.39	mg/Kg dry	1.92	ND	33.6	30-130			
Phenanthrene	1.61	0.20	mg/Kg dry	1.92	0.624	51.4	40-140			

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
<b>Batch B224911 - SW-846 3546</b>										
<b>Matrix Spike (B224911-MS1)</b>	<b>Source: 19C0049-22</b>			Prepared: 03/04/19 Analyzed: 03/05/19						
Phenol	1.15	0.39	mg/Kg dry	1.92	ND	59.9	30-130			V-06
Pyrene	2.59	0.20	mg/Kg dry	1.92	1.15	74.9	40-140			
1,2,4-Trichlorobenzene	0.985	0.39	mg/Kg dry	1.92	ND	51.3	40-140			
2,4,5-Trichlorophenol	0.946	0.39	mg/Kg dry	1.92	ND	49.3	30-130			
2,4,6-Trichlorophenol	0.990	0.39	mg/Kg dry	1.92	ND	51.6	30-130			
Surrogate: 2-Fluorophenol	4.66		mg/Kg dry	7.68		60.7	30-130			
Surrogate: Phenol-d6	4.72		mg/Kg dry	7.68		61.5	30-130			
Surrogate: Nitrobenzene-d5	2.59		mg/Kg dry	3.84		67.6	30-130			
Surrogate: 2-Fluorobiphenyl	2.39		mg/Kg dry	3.84		62.2	30-130			
Surrogate: 2,4,6-Tribromophenol	4.08		mg/Kg dry	7.68		53.2	30-130			
Surrogate: p-Terphenyl-d14	2.76		mg/Kg dry	3.84		72.0	30-130			
<b>Matrix Spike Dup (B224911-MSD1)</b>	<b>Source: 19C0049-22</b>			Prepared: 03/04/19 Analyzed: 03/05/19						
Acenaphthene	1.16	0.20	mg/Kg dry	1.95	ND	59.3	40-140	11.5	30	
Acenaphthylene	1.33	0.20	mg/Kg dry	1.95	0.163	59.9	40-140	12.0	30	
Acetophenone	1.24	0.40	mg/Kg dry	1.95	ND	63.3	40-140	9.12	30	
<b>Aniline</b>	0.444	0.40	mg/Kg dry	1.95	ND	<b>22.8</b> *	40-140	11.4	30	MS-09, V-34
Anthracene	1.29	0.20	mg/Kg dry	1.95	0.117	60.1	40-140	6.96	30	
Benzo(a)anthracene	1.53	0.20	mg/Kg dry	1.95	0.490	53.2	40-140	3.56	30	
Benzo(a)pyrene	1.69	0.20	mg/Kg dry	1.95	0.529	59.7	40-140	5.55	30	
Benzo(b)fluoranthene	1.61	0.20	mg/Kg dry	1.95	0.604	51.3	40-140	4.94	30	
Benzo(g,h,i)perylene	1.19	0.20	mg/Kg dry	1.95	0.251	48.0	40-140	28.3	30	
Benzo(k)fluoranthene	1.37	0.20	mg/Kg dry	1.95	0.259	56.9	40-140	5.87	30	
Bis(2-chloroethoxy)methane	1.53	0.40	mg/Kg dry	1.95	ND	78.6	40-140	6.47	30	
Bis(2-chloroethyl)ether	1.36	0.40	mg/Kg dry	1.95	ND	69.8	40-140	6.16	30	V-06
Bis(2-chloroisopropyl)ether	1.47	0.40	mg/Kg dry	1.95	ND	75.3	40-140	8.44	30	
Bis(2-Ethylhexyl)phthalate	1.60	0.40	mg/Kg dry	1.95	ND	82.1	40-140	8.87	30	
4-Bromophenylphenylether	1.11	0.40	mg/Kg dry	1.95	ND	57.0	40-140	7.36	30	
Butylbenzylphthalate	1.70	0.40	mg/Kg dry	1.95	ND	87.3	40-140	11.2	30	
<b>4-Chloroaniline</b>	0.581	0.77	mg/Kg dry	1.95	ND	<b>29.8</b> *	40-140	7.39	30	MS-09, V-34
2-Chloronaphthalene	1.10	0.40	mg/Kg dry	1.95	ND	56.2	40-140	15.3	30	
2-Chlorophenol	1.18	0.40	mg/Kg dry	1.95	ND	60.5	30-130	12.1	30	
Chrysene	1.66	0.20	mg/Kg dry	1.95	0.559	56.4	40-140	8.61	30	
Dibenz(a,h)anthracene	0.863	0.20	mg/Kg dry	1.95	ND	44.2	40-140	20.1	30	
Dibenzofuran	1.19	0.40	mg/Kg dry	1.95	ND	61.1	40-140	9.97	30	
Di-n-butylphthalate	1.31	0.40	mg/Kg dry	1.95	ND	67.3	40-140	9.14	30	
1,2-Dichlorobenzene	1.03	0.40	mg/Kg dry	1.95	ND	53.0	40-140	4.33	30	
1,3-Dichlorobenzene	1.02	0.40	mg/Kg dry	1.95	ND	52.1	40-140	5.09	30	
1,4-Dichlorobenzene	1.02	0.40	mg/Kg dry	1.95	ND	52.0	40-140	4.62	30	
<b>3,3-Dichlorobenzidine</b>	0.596	0.20	mg/Kg dry	1.95	ND	<b>30.5</b> *	40-140	26.4	30	MS-09
2,4-Dichlorophenol	1.09	0.40	mg/Kg dry	1.95	ND	55.7	30-130	11.2	30	
Diethylphthalate	1.26	0.40	mg/Kg dry	1.95	ND	64.4	40-140	12.8	30	
2,4-Dimethylphenol	1.25	0.40	mg/Kg dry	1.95	ND	64.2	30-130	0.939	30	
Dimethylphthalate	1.23	0.40	mg/Kg dry	1.95	ND	62.8	40-140	10.7	30	
<b>2,4-Dinitrophenol</b>	0.496	0.77	mg/Kg dry	1.95	ND	<b>25.4</b> *	30-130		30	MS-09
2,4-Dinitrotoluene	1.17	0.40	mg/Kg dry	1.95	ND	60.1	40-140	16.7	30	
2,6-Dinitrotoluene	1.25	0.40	mg/Kg dry	1.95	ND	63.8	40-140	14.2	30	
Di-n-octylphthalate	1.40	0.40	mg/Kg dry	1.95	ND	71.8	40-140	11.0	30	
1,2-Diphenylhydrazine/Azobenzene	1.48	0.40	mg/Kg dry	1.95	ND	75.8	40-140	9.49	30	V-06
Fluoranthene	1.82	0.20	mg/Kg dry	1.95	0.798	52.4	40-140	10.1	30	
Fluorene	1.26	0.20	mg/Kg dry	1.95	ND	64.5	40-140	10.9	30	
Hexachlorobenzene	0.982	0.40	mg/Kg dry	1.95	ND	50.3	40-140	6.04	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
<b>Batch B224911 - SW-846 3546</b>										
<b>Matrix Spike Dup (B224911-MSD1)</b>										
		<b>Source: 19C0049-22</b>			Prepared: 03/04/19 Analyzed: 03/05/19					
Hexachlorobutadiene	0.980	0.40	mg/Kg dry	1.95	ND	50.2	40-140	3.87	30	
Hexachloroethane	1.08	0.40	mg/Kg dry	1.95	ND	55.1	40-140	5.16	30	
Indeno(1,2,3-cd)pyrene	1.15	0.20	mg/Kg dry	1.95	0.246	46.3	40-140	20.5	30	
Isophorone	1.36	0.40	mg/Kg dry	1.95	ND	69.7	40-140	7.37	30	V-06
2-Methylnaphthalene	1.18	0.20	mg/Kg dry	1.95	ND	60.3	40-140	7.31	30	
2-Methylphenol	1.40	0.40	mg/Kg dry	1.95	ND	71.7	30-130	20.9	30	
3/4-Methylphenol	1.21	0.40	mg/Kg dry	1.95	ND	62.2	30-130	12.2	30	
Naphthalene	1.18	0.20	mg/Kg dry	1.95	ND	60.5	40-140	5.46	30	
Nitrobenzene	1.30	0.40	mg/Kg dry	1.95	ND	66.4	40-140	5.33	30	V-06
2-Nitrophenol	1.27	0.40	mg/Kg dry	1.95	ND	64.8	30-130	13.5	30	
4-Nitrophenol	1.30	0.77	mg/Kg dry	1.95	ND	66.4	30-130	22.8	30	
Pentachlorophenol	0.867	0.40	mg/Kg dry	1.95	ND	44.4	30-130	29.2	30	
Phenanthrene	1.60	0.20	mg/Kg dry	1.95	0.624	49.9	40-140	0.785	30	
Phenol	1.29	0.40	mg/Kg dry	1.95	ND	65.9	30-130	11.2	30	V-06
Pyrene	2.65	0.20	mg/Kg dry	1.95	1.15	76.8	40-140	2.32	30	
1,2,4-Trichlorobenzene	1.02	0.40	mg/Kg dry	1.95	ND	52.1	40-140	3.28	30	
2,4,5-Trichlorophenol	1.09	0.40	mg/Kg dry	1.95	ND	55.6	30-130	13.7	30	
2,4,6-Trichlorophenol	1.16	0.40	mg/Kg dry	1.95	ND	59.5	30-130	15.9	30	
Surrogate: 2-Fluorophenol	5.07		mg/Kg dry	7.81		65.0	30-130			
Surrogate: Phenol-d6	5.22		mg/Kg dry	7.81		66.9	30-130			
Surrogate: Nitrobenzene-d5	2.75		mg/Kg dry	3.90		70.3	30-130			
Surrogate: 2-Fluorobiphenyl	2.56		mg/Kg dry	3.90		65.6	30-130			
Surrogate: 2,4,6-Tribromophenol	4.69		mg/Kg dry	7.81		60.0	30-130			
Surrogate: p-Terphenyl-d14	3.07		mg/Kg dry	3.90		78.7	30-130			

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**QUALITY CONTROL**

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B224905 - SW-846 3540C</b>										
<b>Blank (B224905-BLK1)</b>										
Prepared: 03/04/19 Analyzed: 03/06/19										
Aroclor-1016	ND	0.020	mg/Kg wet							
Aroclor-1016 [2C]	ND	0.020	mg/Kg wet							R-05
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							R-05
Aroclor-1260 [2C]	ND	0.020	mg/Kg wet							R-05
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	0.194		mg/Kg wet	0.200		97.1	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.189		mg/Kg wet	0.200		94.6	30-150			
Surrogate: Tetrachloro-m-xylene	0.183		mg/Kg wet	0.200		91.3	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.182		mg/Kg wet	0.200		91.1	30-150			
<b>LCS (B224905-BS1)</b>										
Prepared: 03/04/19 Analyzed: 03/06/19										
Aroclor-1016	0.17	0.020	mg/Kg wet	0.200		84.5	40-140			
Aroclor-1016 [2C]	0.17	0.020	mg/Kg wet	0.200		86.6	40-140			R-05
Aroclor-1260	0.17	0.020	mg/Kg wet	0.200		85.4	40-140			R-05
Aroclor-1260 [2C]	0.16	0.020	mg/Kg wet	0.200		82.1	40-140			R-05
Surrogate: Decachlorobiphenyl	0.185		mg/Kg wet	0.200		92.3	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.184		mg/Kg wet	0.200		92.2	30-150			
Surrogate: Tetrachloro-m-xylene	0.165		mg/Kg wet	0.200		82.4	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.165		mg/Kg wet	0.200		82.6	30-150			
<b>LCS Dup (B224905-BSD1)</b>										
Prepared: 03/04/19 Analyzed: 03/06/19										
Aroclor-1016	0.22	0.020	mg/Kg wet	0.200		110	40-140	26.4	30	
Aroclor-1016 [2C]	0.24	0.020	mg/Kg wet	0.200		118	40-140	30.7	* 30	R-05
Aroclor-1260	0.26	0.020	mg/Kg wet	0.200		132	40-140	42.9	* 30	R-05
Aroclor-1260 [2C]	0.25	0.020	mg/Kg wet	0.200		126	40-140	42.4	* 30	R-05
Surrogate: Decachlorobiphenyl	0.293		mg/Kg wet	0.200		146	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.295		mg/Kg wet	0.200		147	30-150			
Surrogate: Tetrachloro-m-xylene	0.0473		mg/Kg wet	0.200		23.7	* 30-150			S-26
Surrogate: Tetrachloro-m-xylene [2C]	0.0472		mg/Kg wet	0.200		23.6	* 30-150			S-26

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**QUALITY CONTROL**

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B224905 - SW-846 3540C</b>										
<b>Matrix Spike (B224905-MS1)</b>										
		<b>Source: 19C0049-21</b>			Prepared: 03/04/19 Analyzed: 03/06/19					
Aroclor-1016	0.27	0.091	mg/Kg dry	0.226	ND	117	40-140			
Aroclor-1016 [2C]	0.23	0.091	mg/Kg dry	0.226	ND	101	40-140			R-05
Aroclor-1260	0.20	0.091	mg/Kg dry	0.226	ND	90.3	40-140			R-05
Aroclor-1260 [2C]	0.19	0.091	mg/Kg dry	0.226	ND	84.7	40-140			R-05
Surrogate: Decachlorobiphenyl	0.183		mg/Kg dry	0.226		80.8	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.180		mg/Kg dry	0.226		79.4	30-150			
Surrogate: Tetrachloro-m-xylene	0.211		mg/Kg dry	0.226		93.2	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.208		mg/Kg dry	0.226		91.7	30-150			
<b>Matrix Spike Dup (B224905-MSD1)</b>										
		<b>Source: 19C0049-21</b>			Prepared: 03/04/19 Analyzed: 03/06/19					
Aroclor-1016	0.23	0.090	mg/Kg dry	0.224	ND	101	40-140	15.4	50	
Aroclor-1016 [2C]	0.22	0.090	mg/Kg dry	0.224	ND	99.3	40-140	2.55	50	R-05
Aroclor-1260	0.20	0.090	mg/Kg dry	0.224	ND	88.2	40-140	3.41	50	R-05
Aroclor-1260 [2C]	0.19	0.090	mg/Kg dry	0.224	ND	84.6	40-140	1.00	50	R-05
Surrogate: Decachlorobiphenyl	0.182		mg/Kg dry	0.224		81.1	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.179		mg/Kg dry	0.224		80.1	30-150			
Surrogate: Tetrachloro-m-xylene	0.203		mg/Kg dry	0.224		90.6	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.200		mg/Kg dry	0.224		89.3	30-150			
<b>Batch B224907 - SW-846 3540C</b>										
<b>Blank (B224907-BLK1)</b>										
		Prepared: 03/04/19 Analyzed: 03/06/19								
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							R-05
Aroclor-1260 [2C]	ND	0.020	mg/Kg wet							R-05
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	0.202		mg/Kg wet	0.200		101	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.226		mg/Kg wet	0.200		113	30-150			
Surrogate: Tetrachloro-m-xylene	0.192		mg/Kg wet	0.200		95.9	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.190		mg/Kg wet	0.200		94.9	30-150			

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**QUALITY CONTROL**

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B224907 - SW-846 3540C</b>										
<b>LCS (B224907-BS1)</b>										
Prepared: 03/04/19 Analyzed: 03/06/19										
Aroclor-1016	0.18	0.020	mg/Kg wet	0.200		89.1	40-140			
Aroclor-1016 [2C]	0.17	0.020	mg/Kg wet	0.200		85.3	40-140			
Aroclor-1260	0.17	0.020	mg/Kg wet	0.200		87.4	40-140			R-05
Aroclor-1260 [2C]	0.18	0.020	mg/Kg wet	0.200		89.3	40-140			R-05
Surrogate: Decachlorobiphenyl	0.210		mg/Kg wet	0.200		105	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.236		mg/Kg wet	0.200		118	30-150			
Surrogate: Tetrachloro-m-xylene	0.201		mg/Kg wet	0.200		100	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.199		mg/Kg wet	0.200		99.3	30-150			
<b>LCS Dup (B224907-BSD1)</b>										
Prepared: 03/04/19 Analyzed: 03/06/19										
Aroclor-1016	0.20	0.020	mg/Kg wet	0.200		99.8	40-140	11.4	30	
Aroclor-1016 [2C]	0.21	0.020	mg/Kg wet	0.200		104	40-140	19.8	30	
Aroclor-1260	0.24	0.020	mg/Kg wet	0.200		122	40-140	33.1 *	30	R-05
Aroclor-1260 [2C]	0.25	0.020	mg/Kg wet	0.200		125	40-140	33.4 *	30	R-05
Surrogate: Decachlorobiphenyl	0.292		mg/Kg wet	0.200		146	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.331		mg/Kg wet	0.200		165 *	30-150			S-26
Surrogate: Tetrachloro-m-xylene	0.0799		mg/Kg wet	0.200		39.9	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.0781		mg/Kg wet	0.200		39.0	30-150			
<b>Matrix Spike (B224907-MS1)</b>										
<b>Source: 19C0049-01</b>										
Prepared: 03/04/19 Analyzed: 03/07/19										
Aroclor-1016	0.25	0.085	mg/Kg dry	0.212	ND	119	40-140			
Aroclor-1016 [2C]	0.26	0.085	mg/Kg dry	0.212	ND	124	40-140			
Aroclor-1260	0.23	0.085	mg/Kg dry	0.212	ND	109	40-140			R-05
Aroclor-1260 [2C]	0.18	0.085	mg/Kg dry	0.212	ND	85.0	40-140			R-05
Surrogate: Decachlorobiphenyl	0.174		mg/Kg dry	0.212		82.4	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.163		mg/Kg dry	0.212		76.8	30-150			
Surrogate: Tetrachloro-m-xylene	0.203		mg/Kg dry	0.212		95.6	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.190		mg/Kg dry	0.212		89.9	30-150			
<b>Matrix Spike Dup (B224907-MSD1)</b>										
<b>Source: 19C0049-01</b>										
Prepared: 03/04/19 Analyzed: 03/07/19										
Aroclor-1016	0.23	0.087	mg/Kg dry	0.218	ND	105	40-140	9.21	50	
Aroclor-1016 [2C]	0.22	0.087	mg/Kg dry	0.218	ND	100	40-140	18.5	50	
Aroclor-1260	0.22	0.087	mg/Kg dry	0.218	ND	99.4	40-140	6.71	50	R-05
Aroclor-1260 [2C]	0.17	0.087	mg/Kg dry	0.218	ND	79.8	40-140	3.41	50	R-05
Surrogate: Decachlorobiphenyl	0.179		mg/Kg dry	0.218		81.9	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.170		mg/Kg dry	0.218		77.9	30-150			
Surrogate: Tetrachloro-m-xylene	0.203		mg/Kg dry	0.218		93.2	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.183		mg/Kg dry	0.218		84.1	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
<b>Batch B224908 - SW-846 3546</b>										
<b>Blank (B224908-BLK1)</b>										
Prepared: 03/04/19 Analyzed: 03/07/19										
TPH (C9-C36)	ND	8.3	mg/Kg wet							
Surrogate: 2-Fluorobiphenyl	2.31		mg/Kg wet	3.33		69.3	40-140			
<b>LCS (B224908-BS1)</b>										
Prepared: 03/04/19 Analyzed: 03/07/19										
TPH (C9-C36)	25.0	8.3	mg/Kg wet	33.3		75.0	40-140			
Surrogate: 2-Fluorobiphenyl	2.48		mg/Kg wet	3.33		74.4	40-140			
<b>LCS Dup (B224908-BSD1)</b>										
Prepared: 03/04/19 Analyzed: 03/07/19										
TPH (C9-C36)	27.5	8.3	mg/Kg wet	33.3		82.4	40-140	9.48	30	
Surrogate: 2-Fluorobiphenyl	2.71		mg/Kg wet	3.33		81.3	40-140			
<b>Matrix Spike (B224908-MS1)</b>										
Source: 19C0049-01 Prepared: 03/04/19 Analyzed: 03/07/19										
TPH (C9-C36)	245	93	mg/Kg dry	37.3	251	-15.3 *	40-140			MS-19
Surrogate: 2-Fluorobiphenyl	2.22		mg/Kg dry	3.73		59.7	40-140			
<b>Matrix Spike Dup (B224908-MSD1)</b>										
Source: 19C0049-01 Prepared: 03/04/19 Analyzed: 03/07/19										
TPH (C9-C36)	398	93	mg/Kg dry	37.2	251	395 *	40-140	47.4 *	30	MS-19
Surrogate: 2-Fluorobiphenyl	1.82		mg/Kg dry	3.72		49.0	40-140			
<b>Batch B224910 - SW-846 3546</b>										
<b>Blank (B224910-BLK1)</b>										
Prepared: 03/04/19 Analyzed: 03/06/19										
TPH (C9-C36)	ND	8.3	mg/Kg wet							
Surrogate: 2-Fluorobiphenyl	2.67		mg/Kg wet	3.33		80.2	40-140			
<b>LCS (B224910-BS1)</b>										
Prepared: 03/04/19 Analyzed: 03/06/19										
TPH (C9-C36)	27.5	8.3	mg/Kg wet	33.3		82.6	40-140			
Surrogate: 2-Fluorobiphenyl	2.90		mg/Kg wet	3.33		86.9	40-140			
<b>LCS Dup (B224910-BSD1)</b>										
Prepared: 03/04/19 Analyzed: 03/06/19										
TPH (C9-C36)	26.4	8.3	mg/Kg wet	33.3		79.2	40-140	4.19	30	
Surrogate: 2-Fluorobiphenyl	2.73		mg/Kg wet	3.33		81.8	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
<b>Batch B224882 - SW-846 7471</b>										
<b>Blank (B224882-BLK1)</b> Prepared: 03/04/19 Analyzed: 03/06/19										
Mercury	ND	0.025	mg/Kg wet							
<b>LCS (B224882-BS1)</b> Prepared: 03/04/19 Analyzed: 03/06/19										
Mercury	3.30	0.36	mg/Kg wet	3.71		89.1	65-135			
<b>LCS Dup (B224882-BSD1)</b> Prepared: 03/04/19 Analyzed: 03/06/19										
Mercury	3.23	0.38	mg/Kg wet	3.71		87.0	65-135	2.35	30	
<b>Batch B224884 - SW-846 7471</b>										
<b>Blank (B224884-BLK1)</b> Prepared: 03/04/19 Analyzed: 03/06/19										
Mercury	ND	0.025	mg/Kg wet							
<b>LCS (B224884-BS1)</b> Prepared: 03/04/19 Analyzed: 03/06/19										
Mercury	3.32	0.38	mg/Kg wet	3.71		89.5	65-135			
<b>LCS Dup (B224884-BSD1)</b> Prepared: 03/04/19 Analyzed: 03/06/19										
Mercury	3.57	0.38	mg/Kg wet	3.71		96.3	65-135	7.33	30	
<b>Duplicate (B224884-DUP1)</b> <b>Source: 19C0049-04</b> Prepared: 03/04/19 Analyzed: 03/06/19										
Mercury	ND	0.030	mg/Kg dry		0.0363			NC	35	
<b>Matrix Spike (B224884-MS1)</b> <b>Source: 19C0049-04</b> Prepared: 03/04/19 Analyzed: 03/06/19										
Mercury	0.406	0.028	mg/Kg dry	0.368	0.0363	101	75-125			
<b>Batch B224886 - SW-846 3050B</b>										
<b>Blank (B224886-BLK1)</b> Prepared: 03/04/19 Analyzed: 03/05/19										
Antimony	ND	1.7	mg/Kg wet							
Arsenic	ND	1.7	mg/Kg wet							
Barium	ND	1.7	mg/Kg wet							
Beryllium	ND	0.17	mg/Kg wet							
Cadmium	ND	0.17	mg/Kg wet							
Chromium	ND	0.33	mg/Kg wet							
Lead	ND	0.50	mg/Kg wet							
Nickel	ND	0.33	mg/Kg wet							
Selenium	ND	3.3	mg/Kg wet							
Silver	ND	0.33	mg/Kg wet							
Thallium	ND	1.7	mg/Kg wet							
Vanadium	ND	0.67	mg/Kg wet							
Zinc	ND	0.67	mg/Kg wet							

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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 B224886 - SW-846 3050B**

**LCS (B224886-BS1)**

Prepared: 03/04/19 Analyzed: 03/05/19

Antimony	69.7	4.9	mg/Kg wet	89.6		77.7	3.3-196.4			
Arsenic	185	4.9	mg/Kg wet	202		91.5	82.7-117.3			
Barium	260	4.9	mg/Kg wet	270		96.4	82.6-117.8			
Beryllium	96.0	0.49	mg/Kg wet	96.8		99.2	83.4-116.7			
Cadmium	137	0.49	mg/Kg wet	141		96.9	83-117			
Chromium	159	0.99	mg/Kg wet	167		95.2	81.4-118			
Lead	67.4	1.5	mg/Kg wet	73.8		91.4	82.9-117.1			
Nickel	90.1	0.99	mg/Kg wet	89.4		101	82.9-117.5			
Selenium	40.1	9.9	mg/Kg wet	49.9		80.3	79.2-120.6			
Silver	71.1	0.99	mg/Kg wet	71.1		100	79.7-120.1			
Thallium	64.5	4.9	mg/Kg wet	58.5		110	80.7-119.5			
Vanadium	51.1	2.0	mg/Kg wet	58.2		87.9	79-121			
Zinc	250	2.0	mg/Kg wet	264		94.7	80.7-119.3			

**LCS Dup (B224886-BSD1)**

Prepared: 03/04/19 Analyzed: 03/05/19

Antimony	71.8	4.9	mg/Kg wet	89.6		80.1	3.3-196.4	3.03	30	
Arsenic	189	4.9	mg/Kg wet	202		93.3	82.7-117.3	1.94	30	
Barium	265	4.9	mg/Kg wet	270		98.1	82.6-117.8	1.75	30	
Beryllium	94.0	0.49	mg/Kg wet	96.8		97.1	83.4-116.7	2.12	30	
Cadmium	136	0.49	mg/Kg wet	141		96.3	83-117	0.665	30	
Chromium	161	0.97	mg/Kg wet	167		96.1	81.4-118	1.00	30	
Lead	69.7	1.5	mg/Kg wet	73.8		94.4	82.9-117.1	3.32	30	
Nickel	89.6	0.97	mg/Kg wet	89.4		100	82.9-117.5	0.525	30	
Selenium	40.5	9.7	mg/Kg wet	49.9		81.2	79.2-120.6	1.07	30	
Silver	73.5	0.97	mg/Kg wet	71.1		103	79.7-120.1	3.25	30	
Thallium	64.2	4.9	mg/Kg wet	58.5		110	80.7-119.5	0.448	30	
Vanadium	52.8	1.9	mg/Kg wet	58.2		90.7	79-121	3.15	30	
Zinc	254	1.9	mg/Kg wet	264		96.2	80.7-119.3	1.55	30	

**MRL Check (B224886-MRL1)**

Prepared: 03/04/19 Analyzed: 03/05/19

Lead	0.536	0.49	mg/Kg wet	0.494		109	80-120			
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**Batch B224899 - SW-846 3050B**

**Blank (B224899-BLK1)**

Prepared: 03/04/19 Analyzed: 03/06/19

Antimony	ND	1.7	mg/Kg wet							
Arsenic	ND	1.7	mg/Kg wet							
Barium	ND	1.7	mg/Kg wet							
Beryllium	ND	0.17	mg/Kg wet							
Cadmium	ND	0.17	mg/Kg wet							
Chromium	ND	0.33	mg/Kg wet							
Lead	ND	0.50	mg/Kg wet							
Nickel	ND	0.33	mg/Kg wet							
Selenium	ND	3.3	mg/Kg wet							
Silver	ND	0.33	mg/Kg wet							
Thallium	ND	1.7	mg/Kg wet							
Vanadium	ND	0.67	mg/Kg wet							
Zinc	ND	0.67	mg/Kg wet							

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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
<b>Batch B224899 - SW-846 3050B</b>										
<b>LCS (B224899-BS1)</b>										
					Prepared: 03/04/19 Analyzed: 03/06/19					
Antimony	69.0	5.0	mg/Kg wet	89.6		77.0	3.3-196.4			
Arsenic	194	5.0	mg/Kg wet	202		96.3	82.7-117.3			
Barium	277	5.0	mg/Kg wet	270		103	82.6-117.8			
Beryllium	96.8	0.50	mg/Kg wet	96.8		100	83.4-116.7			
Cadmium	139	0.50	mg/Kg wet	141		98.5	83-117			
Chromium	167	1.0	mg/Kg wet	167		99.8	81.4-118			
Lead	72.2	1.5	mg/Kg wet	73.8		97.8	82.9-117.1			
Nickel	91.4	1.0	mg/Kg wet	89.4		102	82.9-117.5			
Selenium	44.7	10	mg/Kg wet	49.9		89.5	79.2-120.6			
Silver	79.6	1.0	mg/Kg wet	71.1		112	79.7-120.1			
Thallium	66.4	5.0	mg/Kg wet	58.5		114	80.7-119.5			
Vanadium	54.1	2.0	mg/Kg wet	58.2		93.0	79-121			
Zinc	265	2.0	mg/Kg wet	264		100	80.7-119.3			
<b>LCS Dup (B224899-BSD1)</b>										
					Prepared: 03/04/19 Analyzed: 03/06/19					
Antimony	68.3	5.1	mg/Kg wet	89.6		76.2	3.3-196.4	1.04	30	
Arsenic	185	5.1	mg/Kg wet	202		91.8	82.7-117.3	4.79	30	
Barium	268	5.1	mg/Kg wet	270		99.2	82.6-117.8	3.51	30	
Beryllium	95.0	0.51	mg/Kg wet	96.8		98.2	83.4-116.7	1.83	30	
Cadmium	135	0.51	mg/Kg wet	141		95.9	83-117	2.68	30	
Chromium	160	1.0	mg/Kg wet	167		95.8	81.4-118	4.00	30	
Lead	70.5	1.5	mg/Kg wet	73.8		95.5	82.9-117.1	2.40	30	
Nickel	89.4	1.0	mg/Kg wet	89.4		100	82.9-117.5	2.24	30	
Selenium	42.4	10	mg/Kg wet	49.9		85.1	79.2-120.6	5.14	30	
Silver	76.1	1.0	mg/Kg wet	71.1		107	79.7-120.1	4.53	30	
Thallium	63.2	5.1	mg/Kg wet	58.5		108	80.7-119.5	5.03	30	
Vanadium	52.4	2.0	mg/Kg wet	58.2		90.0	79-121	3.26	30	
Zinc	257	2.0	mg/Kg wet	264		97.5	80.7-119.3	2.72	30	
<b>Duplicate (B224899-DUP1)</b>										
			<b>Source: 19C0049-23</b>		Prepared: 03/04/19 Analyzed: 03/06/19					
Antimony	ND	1.9	mg/Kg dry		ND			NC	35	
Arsenic	6.54	1.9	mg/Kg dry		5.78			12.3	35	
Barium	31.1	1.9	mg/Kg dry		27.7			11.4	35	
Beryllium	0.385	0.19	mg/Kg dry		0.374			3.01	35	
Cadmium	0.406	0.19	mg/Kg dry		0.392			3.47	35	
Chromium	15.7	0.38	mg/Kg dry		16.1			2.33	35	
Lead	34.0	0.57	mg/Kg dry		31.6			7.23	35	
Nickel	10.8	0.38	mg/Kg dry		10.8			0.320	35	
Selenium	ND	3.8	mg/Kg dry		ND			NC	35	
Silver	ND	0.38	mg/Kg dry		ND			NC	35	
Thallium	ND	1.9	mg/Kg dry		ND			NC	35	
Vanadium	19.1	0.76	mg/Kg dry		19.4			1.65	35	
Zinc	36.8	0.76	mg/Kg dry		37.7			2.41	35	

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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 B224899 - SW-846 3050B**

**MRL Check (B224899-MRL1)**

Prepared: 03/04/19 Analyzed: 03/06/19

Lead	0.558	0.49	mg/Kg wet	0.492		113	80-120			
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**Matrix Spike (B224899-MS1)**

**Source: 19C0049-23**

Prepared: 03/04/19 Analyzed: 03/06/19

<b>Antimony</b>	8.09	1.9	mg/Kg dry	18.8	ND	<b>43.0</b> *	75-125			MS-07
Arsenic	24.1	1.9	mg/Kg dry	18.8	5.78	97.1	75-125			
Barium	47.4	1.9	mg/Kg dry	18.8	27.7	105	75-125			
Beryllium	18.7	0.19	mg/Kg dry	18.8	0.374	97.4	75-125			
Cadmium	18.3	0.19	mg/Kg dry	18.8	0.392	95.0	75-125			
Chromium	35.9	0.38	mg/Kg dry	18.8	16.1	105	75-125			
Lead	50.0	0.56	mg/Kg dry	18.8	31.6	97.7	75-125			
Nickel	30.3	0.38	mg/Kg dry	18.8	10.8	103	75-125			
Selenium	14.8	3.8	mg/Kg dry	18.8	ND	78.6	75-125			
Silver	20.7	0.38	mg/Kg dry	18.8	ND	110	75-125			
<b>Thallium</b>	24.2	1.9	mg/Kg dry	18.8	ND	<b>129</b> *	75-125			MS-14
Vanadium	39.1	0.75	mg/Kg dry	18.8	19.4	105	75-125			
Zinc	73.2	0.75	mg/Kg dry	37.6	37.7	94.3	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
<b>Batch B224798 - SW-846 9045C</b>										
<b>LCS (B224798-BS1)</b>				Prepared & Analyzed: 03/01/19						
pH	6.00		pH Units	6.00		100	90-110			
<b>Duplicate (B224798-DUP1)</b>				<b>Source: 19C0049-04</b>		Prepared & Analyzed: 03/01/19				
pH	8.3		pH Units		8.3			0.0606	5	
<b>Batch B224806 - SW-846 9045C</b>										
<b>LCS (B224806-BS1)</b>				Prepared & Analyzed: 03/01/19						
pH	6.01		pH Units	6.00		100	90-110			
<b>LCS (B224806-BS2)</b>				Prepared & Analyzed: 03/01/19						
pH	6.01		pH Units	6.00		100	90-110			
<b>Duplicate (B224806-DUP1)</b>				<b>Source: 19C0049-15</b>		Prepared & Analyzed: 03/01/19				
pH	8.0		pH Units		8.1			0.498	5	
<b>Duplicate (B224806-DUP2)</b>				<b>Source: 19C0049-12</b>		Prepared & Analyzed: 03/01/19				
pH	7.9		pH Units		7.9			0.139	5	
<b>Batch B224810 - % Solids</b>										
<b>Duplicate (B224810-DUP7)</b>				<b>Source: 19C0049-05</b>		Prepared: 03/02/19 Analyzed: 03/03/19				
% Solids	89.7		% Wt		89.7			0.0405	20	
<b>Batch B224816 - SW-846 9014</b>										
<b>Blank (B224816-BLK1)</b>				Prepared: 03/02/19 Analyzed: 03/05/19						
Reactive Cyanide	ND	0.40	mg/Kg							
<b>LCS (B224816-BS1)</b>				Prepared: 03/02/19 Analyzed: 03/05/19						
Reactive Cyanide	9.5	0.40	mg/Kg	10.0		95.4	83.6-111			
<b>Batch B224817 - SW-846 9030A</b>										
<b>Blank (B224817-BLK1)</b>				Prepared: 03/02/19 Analyzed: 03/05/19						
Reactive Sulfide	ND	2.0	mg/Kg							
<b>LCS (B224817-BS1)</b>				Prepared: 03/02/19 Analyzed: 03/05/19						
Reactive Sulfide	15	2.0	mg/Kg	14.8		100	54.9-121			

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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
<b>Batch B224951 - SM21-22 2510B Modified</b>										
<b>Blank (B224951-BLK1)</b>				Prepared & Analyzed: 03/05/19						
Specific conductance	ND	2.0	µmhos/cm							
<b>LCS (B224951-BS1)</b>				Prepared & Analyzed: 03/05/19						
Specific conductance	180		µmhos/cm	192		95.7	90-110			
<b>Batch B225002 - SW-846 9014</b>										
<b>Blank (B225002-BLK1)</b>				Prepared: 03/05/19 Analyzed: 03/06/19						
Reactive Cyanide	ND	0.40	mg/Kg							
<b>LCS (B225002-BS1)</b>				Prepared: 03/05/19 Analyzed: 03/06/19						
Reactive Cyanide	9.5	0.40	mg/Kg	10.0		95.4	83.6-111			
<b>Batch B225003 - SW-846 9030A</b>										
<b>Blank (B225003-BLK1)</b>				Prepared: 03/05/19 Analyzed: 03/06/19						
Reactive Sulfide	ND	2.0	mg/Kg							
<b>LCS (B225003-BS1)</b>				Prepared: 03/05/19 Analyzed: 03/06/19						
Reactive Sulfide	14	2.0	mg/Kg	14.8		97.3	54.9-121			
<b>Batch B225154 - SM21-22 2510B Modified</b>										
<b>Blank (B225154-BLK1)</b>				Prepared & Analyzed: 03/07/19						
Specific conductance	ND	2.0	µmhos/cm							
<b>LCS (B225154-BS1)</b>				Prepared & Analyzed: 03/07/19						
Specific conductance	190		µmhos/cm	192		102	90-110			
<b>Duplicate (B225154-DUP1)</b>				<b>Source: 19C0049-01</b>			Prepared & Analyzed: 03/07/19			
Specific conductance	8.3	2.0	µmhos/cm			8.1		2.69	21	
<b>Batch B225268 - SM21-22 2510B Modified</b>										
<b>Blank (B225268-BLK1)</b>				Prepared & Analyzed: 03/08/19						
Specific conductance	ND	2.0	µmhos/cm							
<b>LCS (B225268-BS1)</b>				Prepared & Analyzed: 03/08/19						
Specific conductance	190		µmhos/cm	192		100	90-110			

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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
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**Batch B225268 - SM21-22 2510B Modified**

**Duplicate (B225268-DUP1)**

**Source: 19C0049-22**

Prepared & Analyzed: 03/08/19

Specific conductance	16	2.0	µmhos/cm		11			35.0	*	21	R-02
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**IDENTIFICATION SUMMARY  
FOR SINGLE COMPONENT ANALYTES**

LCS
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*SW-846 8082A*

Lab Sample ID:                     B224905-BS1                                          Date(s) Analyzed:           03/06/2019                     03/06/2019          

Instrument ID (1):                     ECD4                                          Instrument ID (2):                     ECD4                    

GC Column (1):                      ID:                      (mm)                      GC Column (2):                      ID:                      (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.17	
	2	0.000	-0.030	0.030	0.17	0.0
Aroclor-1260	1	0.000	-0.030	0.030	0.17	
	2	0.000	-0.030	0.030	0.16	6.1

**IDENTIFICATION SUMMARY  
FOR SINGLE COMPONENT ANALYTES**

LCS Dup

*SW-846 8082A*

Lab Sample ID:                     B224905-BSD1                                          Date(s) Analyzed:           03/06/2019                     03/06/2019          

Instrument ID (1):                     ECD4                                          Instrument ID (2):                     ECD4                    

GC Column (1):                      ID:                      (mm)                      GC Column (2):                      ID:                      (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.22	
	2	0.000	-0.030	0.030	0.24	8.7
Aroclor-1260	1	0.000	-0.030	0.030	0.26	
	2	0.000	-0.030	0.030	0.25	3.9

**IDENTIFICATION SUMMARY  
FOR SINGLE COMPONENT ANALYTES**

**Matrix Spike**

*SW-846 8082A*

Lab Sample ID:                   B224905-MS1                                        Date(s) Analyzed:           03/06/2019                     03/06/2019          

Instrument ID (1):                   ECD4                                        Instrument ID (2):                   ECD4                  

GC Column (1):                      ID:                      (mm)                      GC Column (2):                      ID:                      (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.27	
	2	0.000	-0.030	0.030	0.23	16.0
Aroclor-1260	1	0.000	-0.030	0.030	0.20	
	2	0.000	-0.030	0.030	0.19	5.1

**IDENTIFICATION SUMMARY  
FOR SINGLE COMPONENT ANALYTES**  
*SW-846 8082A*

**Matrix Spike Dup**

Lab Sample ID:                   B224905-MSD1                                        Date(s) Analyzed:           03/06/2019                     03/06/2019          

Instrument ID (1):                   ECD4                                        Instrument ID (2):                   ECD4                  

GC Column (1):                      ID:                      (mm)                      GC Column (2):                      ID:                      (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.23	
	2	0.000	-0.030	0.030	0.22	4.4
Aroclor-1260	1	0.000	-0.030	0.030	0.20	
	2	0.000	-0.030	0.030	0.19	5.1



**IDENTIFICATION SUMMARY  
FOR SINGLE COMPONENT ANALYTES**
**LCS Dup**
*SW-846 8082A*

 Lab Sample ID:                   B224907-BSD1                                        Date(s) Analyzed:           03/06/2019                         03/06/2019          

Instrument ID (1): \_\_\_\_\_    Instrument ID (2): \_\_\_\_\_

GC Column (1):                                      ID:                                      (mm)                                      GC Column (2):                                      ID:                                      (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.20	
	2	0.000	-0.030	0.030	0.21	4.9
Aroclor-1260	1	0.000	-0.030	0.030	0.24	
	2	0.000	-0.030	0.030	0.25	4.1

**IDENTIFICATION SUMMARY  
FOR SINGLE COMPONENT ANALYTES**  
*SW-846 8082A*

**Matrix Spike**

Lab Sample ID: B224907-MS1 Date(s) Analyzed: 03/07/2019 03/07/2019

Instrument ID (1): \_\_\_\_\_ Instrument ID (2): \_\_\_\_\_

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.25	
	2	0.000	-0.030	0.030	0.26	3.9
Aroclor-1260	1	0.000	-0.030	0.030	0.23	
	2	0.000	-0.030	0.030	0.18	24.4

**IDENTIFICATION SUMMARY  
FOR SINGLE COMPONENT ANALYTES**  
*SW-846 8082A*

**Matrix Spike Dup**

Lab Sample ID:                     B224907-MSD1                                          Date(s) Analyzed:           03/07/2019                     03/07/2019          

Instrument ID (1): \_\_\_\_\_ Instrument ID (2): \_\_\_\_\_

GC Column (1):                      ID:                      (mm)                      GC Column (2):                      ID:                      (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.23	
	2	0.000	-0.030	0.030	0.22	4.4
Aroclor-1260	1	0.000	-0.030	0.030	0.22	
	2	0.000	-0.030	0.030	0.17	25.6



**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.
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.
MS-07	Matrix spike recovery is outside of control limits. Analysis is in control based on laboratory fortified blank recovery. Possibility of sample matrix effects that lead to low bias for reported result or non-homogeneous sample aliquot cannot be eliminated.
MS-09	Matrix spike recovery and/or matrix spike duplicate recovery outside of control limits. Possibility of sample matrix effects that lead to a low bias for reported result or non-homogeneous sample aliquots cannot be eliminated.
MS-14	Matrix spike recovery is outside of control limits. Data validation is not affected since sample result is "not detected" and recovery bias is on the high side for this compound.
MS-19	Sample to spike ratio is greater than or equal to 4:1. Spiked amount is not representative of the native amount in the sample. Appropriate or meaningful recoveries cannot be calculated.
MS-22	Either matrix spike or MS duplicate is outside of control limits, but the other is within limits. RPD between the two MS/MSD results is within method specified criteria.
O-32	A dilution was performed as part of the standard analytical procedure.
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.
RL-08	Elevated reporting limit due to sample matrix interference. MA CAM reporting limit not met.
S-01	The surrogate recovery for this sample is not available due to sample dilution below the surrogate reporting limit required from high analyte concentration and/or matrix interferences.
S-26	Surrogate outside of control limits.
V-05	Continuing calibration verification (CCV) did not meet method specifications and was biased on the low side for this compound.
V-06	Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side for this compound.
V-16	Response factor is less than method specified minimum acceptable value. Reduced precision and accuracy may be associated with reported result.
V-20	Continuing calibration verification (CCV) 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.

**CERTIFICATIONS**

**Certified Analyses included in this Report**

Analyte	Certifications
<b>SW-846 1030 in Soil</b>	
Ignitability	NY,NH,CT,NC,ME,VA
<b>SW-846 6010D in Soil</b>	
Antimony	CT,NH,NY,ME,VA,NC
Arsenic	CT,NH,NY,ME,VA,NC
Barium	CT,NH,NY,ME,VA,NC
Beryllium	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
Nickel	CT,NH,NY,ME,VA,NC
Selenium	CT,NH,NY,ME,VA,NC
Silver	CT,NH,NY,ME,VA,NC
Thallium	CT,NH,NY,ME,VA,NC
Vanadium	CT,NH,NY,ME,VA,NC
Zinc	CT,NH,NY,ME,VA,NC
<b>SW-846 7471B in Soil</b>	
Mercury	CT,NH,NY,NC,ME,VA
<b>SW-846 8082A in Soil</b>	
Aroclor-1016	CT,NH,NY,ME,NC,VA
Aroclor-1016 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1221	CT,NH,NY,ME,NC,VA
Aroclor-1221 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1232	CT,NH,NY,ME,NC,VA
Aroclor-1232 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1242	CT,NH,NY,ME,NC,VA
Aroclor-1242 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1248	CT,NH,NY,ME,NC,VA
Aroclor-1248 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1254	CT,NH,NY,ME,NC,VA
Aroclor-1254 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1260	CT,NH,NY,ME,NC,VA
Aroclor-1260 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1262	NY,NC,VA
Aroclor-1262 [2C]	NY,NC,VA
Aroclor-1268	NY,NC,VA
Aroclor-1268 [2C]	NY,NC,VA
<b>SW-846 8260C in Soil</b>	
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

## CERTIFICATIONS

## Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8260C in Soil</i>	
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
1,2-Dibromo-3-chloropropane (DBCP)	NY
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
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

**CERTIFICATIONS**

**Certified Analyses included in this Report**

Analyte	Certifications
<b>SW-846 8260C in Soil</b>	
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
<b>SW-846 8270D in Soil</b>	
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
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

**CERTIFICATIONS**

**Certified Analyses included in this Report**

Analyte	Certifications
<b><i>SW-846 8270D in Soil</i></b>	
1,2-Diphenylhydrazine/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
2,4,5-Trichlorophenol	CT,NY,NH
2,4,6-Trichlorophenol	CT,NY,NH
<b><i>SW-846 8270D in Water</i></b>	
Acenaphthene	CT,NY,NH
Acenaphthylene	CT,NY,NH
Acetophenone	NY
Aniline	CT,NY
Anthracene	CT,NY,NH
Benzo(a)anthracene	CT,NY,NH
Benzo(a)pyrene	CT,NY,NH
Benzo(b)fluoranthene	CT,NY,NH
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

**CERTIFICATIONS**

**Certified Analyses included in this Report**

Analyte	Certifications
<i>SW-846 8270D in Water</i>	
1,2-Dichlorobenzene	CT,NY,NH
1,3-Dichlorobenzene	CT,NY,NH
1,4-Dichlorobenzene	CT,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/Azobenzene	NY
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
2,4,5-Trichlorophenol	CT,NY,NH
2,4,6-Trichlorophenol	CT,NY,NH

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

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

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2005	100033	03/1/2020
MA	Massachusetts DEP	M-MA100	06/30/2019
CT	Connecticut Department of Public Health	PH-0567	09/30/2019
NY	New York State Department of Health	10899 NELAP	04/1/2019
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2020
RI	Rhode Island Department of Health	LAO00112	12/30/2019
NC	North Carolina Div. of Water Quality	652	12/31/2019
NJ	New Jersey DEP	MA007 NELAP	06/30/2019
FL	Florida Department of Health	E871027 NELAP	06/30/2019
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2019
ME	State of Maine	2011028	06/9/2019
VA	Commonwealth of Virginia	460217	12/14/2019
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2019
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2019
NC-DW	North Carolina Department of Health	25703	07/31/2019

JLH

Primary Client: **Vertex**  
Address: **One Congress St Ste 302, Boston MA**  
Phone: **781-952-0000**  
Project Name: **Wayland**  
Project Location: **Wayland MA**  
Project Number: **19C049**  
Project Manager: **K Sarson**  
Con-Test Quote Name/Number:  
Invoice Recipient: **K Sarson**  
Sampled By: **K Sarson**

**Requested Turnaround Time**  
7-Day  10-Day   
Due Date: **3/1/19**

**Rush Approval Required**  
1-Day  3-Day   
2-Day  4-Day

**Data Delivery**  
Format: PDF  EXCEL   
Other: **CD**  
CLP Like Data Pkg Required:   
Email To: **ksarson@vertexeng.com**  
Fax To #:

3	1	1	1	1	1															
M	I	I	I	I	I															
V	A	A	A	A	A															

**ANALYSIS REQUESTED**  
VOC 8260  
SVOC 8270  
TPH 800  
MCP 14 Metals  
PCB 8080 in Soxhlet  
Ign/Corr/React/90C

# of Containers  
2 Preservation Code  
3 Container Code

**Disinfectant Matrix Samples**  
 Field Filtered  
 Lab to Filter

**Orthophosphate Samples**  
 Field Filtered  
 Lab to Filter

Con-Test Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	Composite	Grab	Matrix Code	Conc Code													
1	TP-F8(0-5)	03/01/19	0740	X		So														
2	TP-F8(5-10)		0750																	
3	TP-E8(0-5)		0815																	
4	TP-E8(5-10)		0825																	
5	TP-F6(0-5)		0855																	
6	TP-F6(5-10)		0900																	
7	TP-G6(0-5)		0925																	
8	TP-G6(5-10)		0935																	
9	TP-G7(0-5)		1000																	
10	TP-G7(5-10)		1005																	

Client would like the TAT to be changed to 5 day. JLH 3/5/19

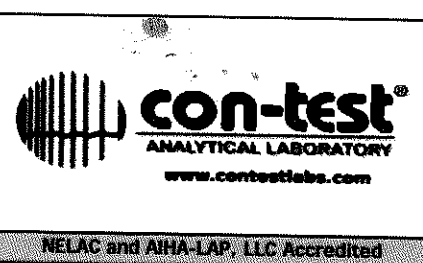
- 1 Matrix Codes:**  
Ground Water  
Waste Water  
Drinking Water  
Sludge  
Solid  
Other (please define)
- 2 Preservation Codes:**  
I = Iced  
H = HCL  
M = Methanol  
N = Nitric Acid  
S = Sulfuric Acid  
B = Sodium Bisulfate  
X = Sodium Hydroxide  
T = Sodium Thiosulfate  
O = Other (please define)
- 3 Container Codes:**  
A = Amber Glass  
G = Glass  
P = Plastic  
ST = Sterile  
V = Vial  
S = Summa Canister  
T = Tedlar Bag  
O = Other (please define)

Comments: 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: 03/01/19 1537
Received by: (signature) <i>[Signature]</i>	Date/Time: 3/1/19 1537
Relinquished by: (signature) <i>[Signature]</i>	Date/Time: 3/1/19 1834
Received by: (signature) <i>[Signature]</i>	Date/Time: 3-1-19 1834
Relinquished by: (signature) <i>[Signature]</i>	Date/Time: 3-1-19 1834
Received by: (signature) <i>[Signature]</i>	Date/Time: 3-1-19 1834

**Detection Limit Requirements**  
MA

**Special Requirements**  
MA MCP Required   
MCP Certification Form Required   
CT RCP Required   
RCP Certification Form Required   
MA State DW Required   
PWSID #



**NELAP and AIHA-LAP, LLC Accredited**

Other  
 Chromatogram  
 AIHA-LAP, LLC

**Project Entity**  
 Government  Municipality  MWRA  WRTA  
 Federal  21 J  School  
 City  Brownfield  MBTA

**PCB ONLY**  
 Soxhlet  
 Non Soxhlet



Address: ONE CORPUS ST, BOSTON MA 02111  
 Phone: 781-552-6000  
 Project Location: Weyland MA  
 Project Number: 40047  
 Project Manager: K SIBSON  
 Con-Test Quote Name/Number: K SIBSON  
 Invoice Recipient: K SIBSON  
 Sampled By: K SIBSON

Con-Test Work Order #	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	Composite	Grab	Matrix Code	Contc Code
11	TP-F7 (0-5)	03/07/19	1025	Y		SP	
12	TP-F7 (5-10)		1115				
13	TP-E7 (0-5)		1200				
14	TP-E7 (5-10)		1205				
15	TP-E6 (0-5)		1215				
16	TP-E6 (5-10)		1220				
17	TP-F5 (0-5)		1240				
18	TP-F5 (5-10)		1245				
19	TP-E5 (0-5)		1310				
20	TP-G5 (5-10)		1315				

7-Day	10-Day	1-Day	3-Day	2-Day	4-Day	Format: PDF	EXCEL	Other: GED	CLP Like Data Pkg Required:	Email To: K.SIBSON@contestlabs.com	Fax To #:
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

ANALYSIS REQUESTED

VOC 8260  
 TPH 8100  
 PCB 8082 via Soxhlet  
 PCB/PAH/PCB/SPC

Special Requirements:  
 MA MCP Required  
 MCP Certification Form Required  
 CT RCP Required  
 RCP Certification Form Required  
 MA State DW Required

Project Entity:  
 Government  
 Federal  
 City  
 Municipality  
 21 J  
 Brownfield  
 MWRA  
 School  
 MBTA  
 WRTA  
 Chromatogram  
 AIHA-LAP, LLC  
 Other

NEIAC and AIHA-LAP, LLC Accredited  
 www.contestlabs.com

Signature: [Signature]  
 Date/Time: 03/07/19 1537

Signature: [Signature]  
 Date/Time: 03/07/19 1631

Signature: [Signature]  
 Date/Time: 3/11/19 1833

Signature: [Signature]  
 Date/Time: 3-1-19 1834

Signature: [Signature]  
 Date/Time: [ ]

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

1 Matrix Codes:  
 GW = Ground Water  
 WW = Waste Water  
 DW = Drinking Water  
 A = Air  
 S = Soil  
 SL = Sludge  
 SOL = Solid  
 O = Other (please define)

2 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)

3 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



JLH  
Kortex  
Address: ONE CONGRESS ST BOSTON MA 02114  
Phone: 781-952-6600  
Project Location: Weymouth, MA  
Project Number: 46047  
Project Manager: K. Sauson  
Con-Test Quote Name/Number:  
Invoice Recipient: K. Sauson  
Sampled By: K. Sauson

7-Day  10-Day   
Due Date:  
1-Day  3-Day   
2-Day  4-Day   
Format: PDF  EXCEL   
Other: GDP  
CLP Like Data Pkg Required:   
Email To: ksouson@verexeng.com  
Fax To #:

Con-Test Work Order #	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	Composite	Grab	Matrix Code	Cont. Code
21	TP-E5 (10-15)	03/09/19	1320	Y		S0	
22	TP-F4 (0-5)		1350				
23	TP-F4 (5-10)		1355				
24	TP-E4 (0-5)		1420				
25	TP-E4 (5-10)		1430				

ANALYSIS REQUESTED

VOC 8060	X		
VOC 8070	X		
TPH 800	X		
MCP 14 Metals	X		
PCB808a via Soxhlet	X		
ign/cont/React/SPE	X		

**1 Matrix Codes:**  
GW = Ground Water  
WW = Waste Water  
DW = Drinking Water  
A = Air  
S = Soil  
SL = Sludge  
SOL = Solid  
O = Other (please define)

**2 Preservation Codes:**  
I = Iced  
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M = Methanol  
N = Nitric Acid  
S = Sulfuric Acid  
B = Sodium Bisulfate  
X = Sodium Hydroxide  
T = Sodium Thiosulfate  
O = Other (please define)

**3 Container Codes:**  
A = Amber Glass  
G = Glass  
P = Plastic  
ST = Sterile  
V = Vial  
S = Summa Canister  
T = Tedlar Bag  
O = Other (please define)

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

**Special Requirements**

MA MCP Required  
 MCP Certification Form Required  
 CT RCP Required  
 RCP Certification Form Required  
 MA State DW Required  
PWSID #



**Project Entity**

Government  
 Federal  
 City  
 Municipality  
 21 J  
 Brownfield  
 MWRA  
 School  
 MBTA  
 Chromatogram  
 AIHA-LAP, LLC  
Other

**PCB ONLY**

Soxhlet  
 Non Soxhlet

I Have Not Confirmed Sample Container Numbers With Lab Staff Before Relinquishing Over Samples \_\_\_\_\_



**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 Vortex

Received By CR Date 3-1-19 Time 1834

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 # 3 Actual Temp - 2.3 5.5  
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 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

Are there Rushes? CR TF

Are there Short Holds? T

Is there enough Volume? T

Is there Headspace where applicable? T

Proper Media/Containers Used? T

Were trip blanks received? F

Do all samples have the proper pH? NA

Who was notified? \_\_\_\_\_

Who was notified? \_\_\_\_\_

Who was notified? Micros

MS/MSD? F

Is splitting samples required? F

On COC? F

Acid \_\_\_\_\_ Base \_\_\_\_\_

Vials	#	Containers:	#	#	#	#
Unp-		1 Liter Amb.		1 Liter Plastic		16 oz Amb.
HCL-		500 mL Amb.		500 mL Plastic		8oz Amb/Clear
Meoh-	<u>25</u>	250 mL Amb.		250 mL Plastic		4oz Amb/Clear
Bisulfate-	<u>50</u>	Flashpoint		Col./Bacteria		2oz Amb/Clear
DI-		Other Glass		Other Plastic		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 #: 19C0049
Project Location: Wayland, MA	RTN:

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]  
 19C0049-01 thru 19C0049-25

Matrices: Soil

**CAM Protocol (check all that below)**

8260 VOC CAM II A (X)	7470/7471 Hg CAM IIIB (X)	MassDEP VPH CAM IV A ( )	8082 PCB CAM V A (X)	9014 Total Cyanide/PAC CAM VI A ( )	6860 Perchlorate CAM VIII B ( )
8270 SVOC CAM II B (X)	7010 Metals CAM III C ( )	MassDEP VPH CAM IV C ( )	8081 Pesticides CAM V B ( )	7196 Hex Cr CAM VI B ( )	MassDEP APH CAM IX A ( )
6010 Metals CAM III A (X)	6020 Metals CAM III D ( )	MassDEP EPH CAM IV B ( )	8151 Herbicides CAM V C ( )	8330 Explosives CAM VIII A ( )	TO-15 VOC CAM IX B ( )

**Affirmative response to Questions A through F is required for "Presumptive Certainty" status**

<b>A</b>	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?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>B</b>	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>C</b>	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>D</b>	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?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>E a</b>	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).	<input type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>E b</b>	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	<input type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>F</b>	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)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>

**A response to questions G, H and I below is required for "Presumptive Certainty" status**

<b>G</b>	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <sup>1</sup>
----------	---	--

**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.**

<b>H</b>	Were all QC performance standards specified in the CAM protocol(s) achieved?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <sup>1</sup>
<b>I</b>	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>

<sup>1</sup>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:                     Lisa Worthington                     Position:                     Project Manager                      
 Printed Name:                     Lisa A. Worthington                     Date:                     03/08/19

March 19, 2019

Kristen Sarson  
Vertex Engineering - Boston  
100 North Washington St. Suite 302  
Boston, MA 02114

Project Location: Wayland, MA  
Client Job Number:  
Project Number: 46047  
Laboratory Work Order Number: 19C0442

Enclosed are results of analyses for samples received by the laboratory on March 12, 2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, reading "Jessica Hoffman", is displayed on a light blue rectangular background. The signature is written in a cursive, flowing style.

Jessica L. Hoffman  
Project Manager

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Vertex Engineering - Boston  
 100 North Washington St. Suite 302  
 Boston, MA 02114  
 ATTN: Kristen Sarson

REPORT DATE: 3/19/2019

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 46047

**ANALYTICAL SUMMARY**

WORK ORDER NUMBER: 19C0442

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

PROJECT LOCATION: Wayland, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
TP-D7 (0-5)	19C0442-01	Soil		SM 2540G	
				SM21-22 2510B	
				SW-846 1030	
				SW-846 6010D	
				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	
				TP-D7 (5-10)	19C0442-02
SM21-22 2510B					
SW-846 1030					
SW-846 6010D					
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					
TP-D6 (0-5)	19C0442-03	Soil			
				SM21-22 2510B	
				SW-846 1030	
				SW-846 6010D	
				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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FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
TP-D6 (5-10)	19C0442-04	Soil		SM 2540G	
				SM21-22 2510B	
				SW-846 1030	
				SW-846 6010D	
				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	
				TP-C6 (0-5)	19C0442-05
SM21-22 2510B					
SW-846 1030					
SW-846 6010D					
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					
TP-C6 (5-10)	19C0442-06	Soil			
				SM21-22 2510B	
				SW-846 1030	
				SW-846 6010D	
				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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WORK ORDER NUMBER: 19C0442

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PROJECT LOCATION: Wayland, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
TP-B6 (0-5)	19C0442-07	Soil		SM 2540G	
				SM21-22 2510B	
				SW-846 1030	
				SW-846 6010D	
				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	
				TP-B6 (5-10)	19C0442-08
SM21-22 2510B					
SW-846 1030					
SW-846 6010D					
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					
TP-B5 (0-5)	19C0442-09	Soil			
				SM21-22 2510B	
				SW-846 1030	
				SW-846 6010D	
				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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PROJECT LOCATION: Wayland, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
TP-B5 (5-10)	19C0442-10	Soil		SM 2540G	
				SM21-22 2510B	
				SW-846 1030	
				SW-846 6010D	
				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	
				TP-C5 (0-5)	19C0442-11
SM21-22 2510B					
SW-846 1030					
SW-846 6010D					
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					
TP-C5 (5-10)	19C0442-12	Soil			
				SM21-22 2510B	
				SW-846 1030	
				SW-846 6010D	
				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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PROJECT LOCATION: Wayland, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
TP-D5 (0-5)	19C0442-13	Soil		SM 2540G	
				SM21-22 2510B	
				SW-846 1030	
				SW-846 6010D	
				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	
				TP-D5 (5-10)	19C0442-14
SM21-22 2510B					
SW-846 1030					
SW-846 6010D					
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					
TP-D4 (0-5)	19C0442-15	Soil			
				SM21-22 2510B	
				SW-846 1030	
				SW-846 6010D	
				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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PROJECT LOCATION: Wayland, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
TP-D4 (5-10)	19C0442-16	Soil		SM 2540G	
				SM21-22 2510B	
				SW-846 1030	
				SW-846 6010D	
				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	
				TP-C4 (0-5)	19C0442-17
SM21-22 2510B					
SW-846 1030					
SW-846 6010D					
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					
TP-C4 (5-10)	19C0442-18	Soil			
				SM21-22 2510B	
				SW-846 1030	
				SW-846 6010D	
				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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PROJECT LOCATION: Wayland, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
TP-B4 (0-5)	19C0442-19	Soil		SM 2540G	
				SM21-22 2510B	
				SW-846 1030	
				SW-846 6010D	
				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	
				TP-B4 (5-10)	19C0442-20
SM21-22 2510B					
Modified					
SW-846 1030					
SW-846 6010D					
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					
TP-A5 (0-5)	19C0442-21	Soil		SM 2540G	
				SM21-22 2510B	
				Modified	
				SW-846 1030	
				SW-846 6010D	
				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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REPORT DATE: 3/19/2019

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**ANALYTICAL SUMMARY**

WORK ORDER NUMBER: 19C0442

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PROJECT LOCATION: Wayland, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
TP-A5 (5-10)	19C0442-22	Soil		SM 2540G	
				SM21-22 2510B	
				Modified	
				SW-846 1030	
				SW-846 6010D	
				SW-846 7471B	
				SW-846 8082A	
				SW-846 8100 Modified	
				SW-846 8260C	
				SW-846 8270D	
				SW-846 9014	
				SW-846 9030A	
				TP-A4 (0-5)	
SM21-22 2510B					
Modified					
SW-846 1030					
SW-846 6010D					
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					
TP-A4 (5-10)	19C0442-24	Soil		SM 2540G	
				SM21-22 2510B	
				Modified	
				SW-846 1030	
				SW-846 6010D	
				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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REPORT DATE: 3/19/2019

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 46047

**ANALYTICAL SUMMARY**

WORK ORDER NUMBER: 19C0442

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

PROJECT LOCATION: Wayland, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
TP-A3 (0-5)	19C0442-25	Soil		SM 2540G	
				SM21-22 2510B	
				Modified	
				SW-846 1030	
				SW-846 6010D	
				SW-846 7471B	
				SW-846 8082A	
				SW-846 8100 Modified	
				SW-846 8260C	
				SW-846 8270D	
				SW-846 9014	
				SW-846 9030A	
				TP-A3 (5-10)	
SM21-22 2510B					
Modified					
SW-846 1030					
SW-846 6010D					
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					
TP-B3 (0-5)	19C0442-27	Soil		SM 2540G	
				SM21-22 2510B	
				Modified	
				SW-846 1030	
				SW-846 6010D	
				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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REPORT DATE: 3/19/2019

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PROJECT NUMBER: 46047

**ANALYTICAL SUMMARY**

WORK ORDER NUMBER: 19C0442

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

PROJECT LOCATION: Wayland, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
TP-B3 (5-10)	19C0442-28	Soil		SM 2540G SM21-22 2510B Modified SW-846 1030 SW-846 6010D 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	

**CASE NARRATIVE SUMMARY**

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

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SW-846 6010D

**Qualifications:****M-07**

Result is serial dilution as per MA CAM/ CT RCP regulation.

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

19C0442-01[TP-D7 (0-5)], B225671-MS1

**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**

19C0442-21[TP-A5 (0-5)], 19C0442-22[TP-A5 (5-10)], 19C0442-23[TP-A4 (0-5)], 19C0442-24[TP-A4 (5-10)], 19C0442-25[TP-A3 (0-5)], 19C0442-26[TP-A3 (5-10)], 19C0442-27[TP-B3 (0-5)], 19C0442-28[TP-B3 (5-10)], B225677-MRL1

**MS-07**

Matrix spike recovery is outside of control limits. Analysis is in control based on laboratory fortified blank recovery. Possibility of sample matrix effects that lead to low bias for reported result or non-homogeneous sample aliquot cannot be eliminated.

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

19C0442-27[TP-B3 (0-5)], B225677-MS1

**Selenium**

19C0442-27[TP-B3 (0-5)], B225677-MS1

**MS-14**

Matrix spike recovery is outside of control limits. Data validation is not affected since sample result is "not detected" and recovery bias is on the high side for this compound.

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

19C0442-01[TP-D7 (0-5)], B225671-MS1

SW-846 8082A

**Qualifications:****O-32**

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

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

19C0442-01[TP-D7 (0-5)], 19C0442-02[TP-D7 (5-10)], 19C0442-03[TP-D6 (0-5)], 19C0442-04[TP-D6 (5-10)], 19C0442-05[TP-C6 (0-5)], 19C0442-06[TP-C6 (5-10)], 19C0442-07[TP-B6 (0-5)], 19C0442-08[TP-B6 (5-10)], 19C0442-09[TP-B5 (0-5)], 19C0442-10[TP-B5 (5-10)], 19C0442-11[TP-C5 (0-5)], 19C0442-12[TP-C5 (5-10)], 19C0442-13[TP-D5 (0-5)], 19C0442-14[TP-D5 (5-10)], 19C0442-15[TP-D4 (0-5)], 19C0442-16[TP-D4 (5-10)], 19C0442-17[TP-C4 (0-5)], 19C0442-18[TP-C4 (5-10)], 19C0442-19[TP-B4 (0-5)], 19C0442-20[TP-B4 (5-10)], 19C0442-21[TP-A5 (0-5)], 19C0442-22[TP-A5 (5-10)], 19C0442-23[TP-A4 (0-5)], 19C0442-24[TP-A4 (5-10)], 19C0442-25[TP-A3 (0-5)], 19C0442-26[TP-A3 (5-10)], 19C0442-27[TP-B3 (0-5)], 19C0442-28[TP-B3 (5-10)]

SW-846 8100 Modified

**Qualifications:****MS-22**

Either matrix spike or MS duplicate is outside of control limits, but the other is within limits. RPD between the two MS/MSD results is within method specified criteria.

**Analyte & Samples(s) Qualified:****TPH (C9-C36)**

B225790-MS1

**S-01**

The surrogate recovery for this sample is not available due to sample dilution below the surrogate reporting limit required from high analyte concentration and/or matrix interferences.

**Analyte & Samples(s) Qualified:****2-Fluorobiphenyl**

19C0442-02[TP-D7 (5-10)], 19C0442-03[TP-D6 (0-5)], 19C0442-04[TP-D6 (5-10)], 19C0442-05[TP-C6 (0-5)], 19C0442-06[TP-C6 (5-10)], 19C0442-07[TP-B6 (0-5)], 19C0442-08[TP-B6 (5-10)], 19C0442-13[TP-D5 (0-5)], 19C0442-14[TP-D5 (5-10)], 19C0442-15[TP-D4 (0-5)], 19C0442-16[TP-D4 (5-10)], 19C0442-17[TP-C4 (0-5)], 19C0442-18[TP-C4 (5-10)], 19C0442-20[TP-B4 (5-10)], 19C0442-21[TP-A5 (0-5)], 19C0442-22[TP-A5 (5-10)], 19C0442-23[TP-A4 (0-5)], 19C0442-24[TP-A4 (5-10)], 19C0442-25[TP-A3 (0-5)], 19C0442-26[TP-A3 (5-10)], 19C0442-27[TP-B3 (0-5)], 19C0442-28[TP-B3 (5-10)], B225790-MS1, B225790-MSD1

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:****Vinyl Chloride**

19C0442-02[TP-D7 (5-10)], 19C0442-09[TP-B5 (0-5)], B225708-BLK1, B225708-BS1, B225708-BSD1, S033517-CCV1

**L-07A**

Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD outside of control limits. Reduced precision anticipated for any reported result for this compound.

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

B225660-BS1

**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:****Acetone**

19C0442-12[TP-C5 (5-10)], 19C0442-13[TP-D5 (0-5)], 19C0442-14[TP-D5 (5-10)], 19C0442-15[TP-D4 (0-5)], 19C0442-16[TP-D4 (5-10)], 19C0442-17[TP-C4 (0-5)], B225660-BLK1, B225660-BS1, B225660-BSD1

**Methylene Chloride**

19C0442-01[TP-D7 (0-5)], 19C0442-03[TP-D6 (0-5)], 19C0442-04[TP-D6 (5-10)], 19C0442-05[TP-C6 (0-5)], 19C0442-06[TP-C6 (5-10)], 19C0442-07[TP-B6 (0-5)], 19C0442-08[TP-B6 (5-10)], 19C0442-10[TP-B5 (5-10)], 19C0442-11[TP-C5 (0-5)], B225643-BLK1, B225643-BS1, B225643-BSD1

**V-05**

Continuing calibration verification (CCV) did not meet method specifications and was biased on the low side for this compound.

**Analyte & Samples(s) Qualified:****1,2-Dibromo-3-chloropropane (DBP)**

19C0442-18[TP-C4 (5-10)], 19C0442-19[TP-B4 (0-5)], 19C0442-20[TP-B4 (5-10)], 19C0442-21[TP-A5 (0-5)], 19C0442-22[TP-A5 (5-10)], 19C0442-23[TP-A4 (0-5)], 19C0442-24[TP-A4 (5-10)], 19C0442-25[TP-A3 (0-5)], 19C0442-26[TP-A3 (5-10)], 19C0442-27[TP-B3 (0-5)], 19C0442-28[TP-B3 (5-10)], B225666-BLK1, B225666-BS1, B225666-BSD1, S033475-CCV1

**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**

19C0442-01[TP-D7 (0-5)], 19C0442-03[TP-D6 (0-5)], 19C0442-04[TP-D6 (5-10)], 19C0442-05[TP-C6 (0-5)], 19C0442-06[TP-C6 (5-10)], 19C0442-07[TP-B6 (0-5)], 19C0442-08[TP-B6 (5-10)], 19C0442-10[TP-B5 (5-10)], 19C0442-11[TP-C5 (0-5)], 19C0442-12[TP-C5 (5-10)], 19C0442-13[TP-D5 (0-5)], 19C0442-14[TP-D5 (5-10)], 19C0442-15[TP-D4 (0-5)], 19C0442-16[TP-D4 (5-10)], 19C0442-17[TP-C4 (0-5)], 19C0442-18[TP-C4 (5-10)], 19C0442-19[TP-B4 (0-5)], 19C0442-20[TP-B4 (5-10)], 19C0442-21[TP-A5 (0-5)], 19C0442-22[TP-A5 (5-10)], 19C0442-23[TP-A4 (0-5)], 19C0442-24[TP-A4 (5-10)], 19C0442-25[TP-A3 (0-5)], 19C0442-26[TP-A3 (5-10)], 19C0442-27[TP-B3 (0-5)], 19C0442-28[TP-B3 (5-10)], B225643-BLK1, B225643-BS1, B225643-BSD1, B225660-BLK1, B225660-BS1, B225660-BSD1, B225666-BLK1, B225666-BS1, B225666-BSD1, S033470-CCV1

**V-20**

Continuing calibration verification (CCV) 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:****Bromoform**

B225708-BS1, B225708-BSD1, S033517-CCV1

**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**

19C0442-01[TP-D7 (0-5)], 19C0442-02[TP-D7 (5-10)], 19C0442-03[TP-D6 (0-5)], 19C0442-04[TP-D6 (5-10)], 19C0442-05[TP-C6 (0-5)], 19C0442-06[TP-C6 (5-10)], 19C0442-07[TP-B6 (0-5)], 19C0442-08[TP-B6 (5-10)], 19C0442-09[TP-B5 (0-5)], 19C0442-10[TP-B5 (5-10)], 19C0442-11[TP-C5 (0-5)], 19C0442-12[TP-C5 (5-10)], 19C0442-13[TP-D5 (0-5)], 19C0442-14[TP-D5 (5-10)], 19C0442-15[TP-D4 (0-5)], 19C0442-16[TP-D4 (5-10)], 19C0442-17[TP-C4 (0-5)], 19C0442-18[TP-C4 (5-10)], 19C0442-19[TP-B4 (0-5)], 19C0442-20[TP-B4 (5-10)], 19C0442-21[TP-A5 (0-5)], 19C0442-22[TP-A5 (5-10)], 19C0442-23[TP-A4 (0-5)], 19C0442-24[TP-A4 (5-10)], 19C0442-25[TP-A3 (0-5)], 19C0442-26[TP-A3 (5-10)], 19C0442-27[TP-B3 (0-5)], 19C0442-28[TP-B3 (5-10)], B225643-BLK1, B225643-BS1, B225643-BSD1, B225660-BLK1, B225660-BS1, B225660-BSD1, B225666-BLK1, B225666-BS1, B225666-BSD1, B225708-BLK1, B225708-BS1, B225708-BSD1, S033470-CCV1, S033475-CCV1, S033477-CCV1, S033517-CCV1

SW-846 8270D

**Qualifications:**

**MS-09**

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

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

19C0442-24[TP-A4 (5-10)], B225793-MS1, B225793-MSD1

**4-Nitrophenol**

19C0442-24[TP-A4 (5-10)], B225793-MS1, B225793-MSD1

**Aniline**

19C0442-04[TP-D6 (5-10)], B225792-MS1, B225792-MSD1

**Anthracene**

19C0442-04[TP-D6 (5-10)], 19C0442-24[TP-A4 (5-10)], B225792-MS1, B225792-MSD1, B225793-MS1, B225793-MSD1

**Benzo(a)anthracene**

19C0442-04[TP-D6 (5-10)], B225792-MS1, B225792-MSD1

**Benzo(a)pyrene**

19C0442-04[TP-D6 (5-10)], B225792-MS1, B225792-MSD1

**Benzo(b)fluoranthene**

19C0442-04[TP-D6 (5-10)], B225792-MS1, B225792-MSD1

**Benzo(k)fluoranthene**

19C0442-04[TP-D6 (5-10)], B225792-MS1, B225792-MSD1

**Chrysene**

19C0442-04[TP-D6 (5-10)], B225792-MS1, B225792-MSD1

**Fluoranthene**

19C0442-04[TP-D6 (5-10)], B225792-MS1, B225792-MSD1

**Indeno(1,2,3-cd)pyrene**

19C0442-04[TP-D6 (5-10)], B225792-MS1, B225792-MSD1

**Phenanthrene**

19C0442-04[TP-D6 (5-10)], B225792-MS1, B225792-MSD1

**Pyrene**

19C0442-04[TP-D6 (5-10)], B225792-MS1, B225792-MSD1

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**MS-22**

Either matrix spike or MS duplicate is outside of control limits, but the other is within limits. RPD between the two MS/MSD results is within method specified criteria.

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

B225792-MSD1

**Pyrene**

B225793-MS1

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**R-06**

Matrix spike duplicate RPD is outside of control limits. Reduced precision is anticipated for reported result for this compound in this sample.

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

19C0442-04[TP-D6 (5-10)], B225792-MS1, B225792-MSD1

**Phenanthrene**

19C0442-04[TP-D6 (5-10)], B225792-MS1, B225792-MSD1

**Pyrene**

19C0442-04[TP-D6 (5-10)], B225792-MS1, B225792-MSD1

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**RL-06**

Elevated reporting limit due to high concentration of non-target compounds. MA CAM reporting limit not met.

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

B225792-MSD1

**RL-08**

Elevated reporting limit due to sample matrix interference. MA CAM reporting limit not met.

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

19C0442-01[TP-D7 (0-5)], 19C0442-02[TP-D7 (5-10)], 19C0442-03[TP-D6 (0-5)], 19C0442-04[TP-D6 (5-10)], 19C0442-05[TP-C6 (0-5)], 19C0442-07[TP-B6 (0-5)], 19C0442-08[TP-B6 (5-10)], 19C0442-09[TP-B5 (0-5)], 19C0442-10[TP-B5 (5-10)], 19C0442-13[TP-D5 (0-5)], 19C0442-15[TP-D4 (0-5)], 19C0442-16[TP-D4 (5-10)], 19C0442-17[TP-C4 (0-5)], 19C0442-18[TP-C4 (5-10)], 19C0442-19[TP-B4 (0-5)], 19C0442-21[TP-A5 (0-5)], 19C0442-22[TP-A5 (5-10)], 19C0442-23[TP-A4 (0-5)], 19C0442-24[TP-A4 (5-10)], 19C0442-25[TP-A3 (0-5)], 19C0442-26[TP-A3 (5-10)], 19C0442-27[TP-B3 (0-5)], 19C0442-28[TP-B3 (5-10)], B225792-MS1, B225792-MSD1, B225793-MS1, B225793-MSD1

**V-05**

Continuing calibration verification (CCV) did not meet method specifications and was biased on the low side for this compound.

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

19C0442-21[TP-A5 (0-5)], 19C0442-22[TP-A5 (5-10)], 19C0442-23[TP-A4 (0-5)], 19C0442-24[TP-A4 (5-10)], 19C0442-25[TP-A3 (0-5)], 19C0442-26[TP-A3 (5-10)], 19C0442-27[TP-B3 (0-5)], 19C0442-28[TP-B3 (5-10)], B225793-MS1, B225793-MSD1, S033582-CCV1

**Pentachlorophenol**

19C0442-21[TP-A5 (0-5)], 19C0442-22[TP-A5 (5-10)], 19C0442-23[TP-A4 (0-5)], 19C0442-24[TP-A4 (5-10)], 19C0442-25[TP-A3 (0-5)], 19C0442-26[TP-A3 (5-10)], 19C0442-27[TP-B3 (0-5)], 19C0442-28[TP-B3 (5-10)], B225793-MS1, B225793-MSD1, S033582-CCV1

**V-06**

Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side for this compound.

**Analyte & Samples(s) Qualified:****Dibenz(a,h)anthracene**

19C0442-06[TP-C6 (5-10)], B225792-BS1, B225792-BSD1, B225792-MS1, B225792-MSD1, S033577-CCV1

**Di-n-octylphthalate**

B225793-MS1, B225793-MSD1, S033582-CCV1

**V-20**

Continuing calibration verification (CCV) 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:****Dibenz(a,h)anthracene**

19C0442-01[TP-D7 (0-5)], 19C0442-02[TP-D7 (5-10)], 19C0442-03[TP-D6 (0-5)], 19C0442-04[TP-D6 (5-10)], 19C0442-05[TP-C6 (0-5)], 19C0442-07[TP-B6 (0-5)], 19C0442-08[TP-B6 (5-10)], 19C0442-09[TP-B5 (0-5)], 19C0442-10[TP-B5 (5-10)], 19C0442-11[TP-C5 (0-5)], 19C0442-20[TP-B4 (5-10)], B225792-BLK1

**Di-n-octylphthalate**

19C0442-21[TP-A5 (0-5)], 19C0442-22[TP-A5 (5-10)], 19C0442-23[TP-A4 (0-5)], 19C0442-24[TP-A4 (5-10)], 19C0442-25[TP-A3 (0-5)], 19C0442-26[TP-A3 (5-10)], 19C0442-27[TP-B3 (0-5)], 19C0442-28[TP-B3 (5-10)]

**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:****4-Chloroaniline**

19C0442-01[TP-D7 (0-5)], 19C0442-02[TP-D7 (5-10)], 19C0442-03[TP-D6 (0-5)], 19C0442-04[TP-D6 (5-10)], 19C0442-05[TP-C6 (0-5)], 19C0442-06[TP-C6 (5-10)], 19C0442-07[TP-B6 (0-5)], 19C0442-08[TP-B6 (5-10)], 19C0442-09[TP-B5 (0-5)], 19C0442-10[TP-B5 (5-10)], 19C0442-11[TP-C5 (0-5)], 19C0442-12[TP-C5 (5-10)], 19C0442-13[TP-D5 (0-5)], 19C0442-14[TP-D5 (5-10)], 19C0442-15[TP-D4 (0-5)], 19C0442-16[TP-D4 (5-10)], 19C0442-17[TP-C4 (0-5)], 19C0442-18[TP-C4 (5-10)], 19C0442-19[TP-B4 (0-5)], 19C0442-20[TP-B4 (5-10)], 19C0442-21[TP-A5 (0-5)], 19C0442-22[TP-A5 (5-10)], 19C0442-23[TP-A4 (0-5)], 19C0442-24[TP-A4 (5-10)], 19C0442-25[TP-A3 (0-5)], 19C0442-26[TP-A3 (5-10)], 19C0442-27[TP-B3 (0-5)], 19C0442-28[TP-B3 (5-10)], B225792-BLK1, B225792-BS1, B225792-BSD1, B225792-MS1, B225792-MSD1, B225793-BLK1, B225793-BS1, B225793-BSD1, B225793-MS1, B225793-MSD1, S033571-CCV1, S033577-CCV1, S033582-CCV1, S033630-CCV1

**Aniline**

19C0442-01[TP-D7 (0-5)], 19C0442-02[TP-D7 (5-10)], 19C0442-03[TP-D6 (0-5)], 19C0442-04[TP-D6 (5-10)], 19C0442-05[TP-C6 (0-5)], 19C0442-06[TP-C6 (5-10)], 19C0442-07[TP-B6 (0-5)], 19C0442-08[TP-B6 (5-10)], 19C0442-09[TP-B5 (0-5)], 19C0442-10[TP-B5 (5-10)], 19C0442-11[TP-C5 (0-5)], 19C0442-12[TP-C5 (5-10)], 19C0442-13[TP-D5 (0-5)], 19C0442-14[TP-D5 (5-10)], 19C0442-15[TP-D4 (0-5)], 19C0442-16[TP-D4 (5-10)], 19C0442-17[TP-C4 (0-5)], 19C0442-18[TP-C4 (5-10)], 19C0442-19[TP-B4 (0-5)], 19C0442-20[TP-B4 (5-10)], 19C0442-21[TP-A5 (0-5)], 19C0442-22[TP-A5 (5-10)], 19C0442-23[TP-A4 (0-5)], 19C0442-24[TP-A4 (5-10)], 19C0442-25[TP-A3 (0-5)], 19C0442-26[TP-A3 (5-10)], 19C0442-27[TP-B3 (0-5)], 19C0442-28[TP-B3 (5-10)], B225792-BLK1, B225792-BS1, B225792-BSD1, B225792-MS1, B225792-MSD1, B225793-BS1, B225793-BSD1, B225793-MS1, B225793-MSD1, S033571-CCV1, S033577-CCV1, S033582-CCV1, S033630-CCV1

**SW-846 9045C****Qualifications:**

**H-03**

Sample received after recommended holding time was exceeded.

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

19C0442-01[TP-D7 (0-5)], 19C0442-02[TP-D7 (5-10)], 19C0442-03[TP-D6 (0-5)], 19C0442-04[TP-D6 (5-10)], 19C0442-05[TP-C6 (0-5)], 19C0442-06[TP-C6 (5-10)], 19C0442-07[TP-B6 (0-5)], 19C0442-08[TP-B6 (5-10)], 19C0442-09[TP-B5 (0-5)], 19C0442-10[TP-B5 (5-10)], 19C0442-11[TP-C5 (0-5)], 19C0442-12[TP-C5 (5-10)], 19C0442-13[TP-D5 (0-5)], 19C0442-14[TP-D5 (5-10)], 19C0442-15[TP-D4 (0-5)], 19C0442-16[TP-D4 (5-10)], 19C0442-17[TP-C4 (0-5)], 19C0442-18[TP-C4 (5-10)], 19C0442-19[TP-B4 (0-5)], 19C0442-20[TP-B4 (5-10)], 19C0442-21[TP-A5 (0-5)], 19C0442-22[TP-A5 (5-10)], 19C0442-23[TP-A4 (0-5)], 19C0442-24[TP-A4 (5-10)], 19C0442-25[TP-A3 (0-5)], 19C0442-26[TP-A3 (5-10)], 19C0442-27[TP-B3 (0-5)], 19C0442-28[TP-B3 (5-10)], B225616-DUP1, B225616-DUP2, B225617-DUP1

**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: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-D7 (0-5)

Sampled: 3/11/2019 07:50

Sample ID: 19C0442-01

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.089	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 11:48	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00089	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 11:48	MFF
Benzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 11:48	MFF
Bromobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 11:48	MFF
Bromochloromethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 11:48	MFF
Bromodichloromethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 11:48	MFF
Bromoform	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 11:48	MFF
Bromomethane	ND	0.0089	mg/Kg dry	1	V-34	SW-846 8260C	3/13/19	3/13/19 11:48	MFF
2-Butanone (MEK)	ND	0.035	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 11:48	MFF
n-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 11:48	MFF
sec-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 11:48	MFF
tert-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 11:48	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00089	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 11:48	MFF
Carbon Disulfide	ND	0.0053	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 11:48	MFF
Carbon Tetrachloride	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 11:48	MFF
Chlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 11:48	MFF
Chlorodibromomethane	ND	0.00089	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 11:48	MFF
Chloroethane	ND	0.0089	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 11:48	MFF
Chloroform	ND	0.0035	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 11:48	MFF
Chloromethane	ND	0.0089	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 11:48	MFF
2-Chlorotoluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 11:48	MFF
4-Chlorotoluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 11:48	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 11:48	MFF
1,2-Dibromoethane (EDB)	ND	0.00089	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 11:48	MFF
Dibromomethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 11:48	MFF
1,2-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 11:48	MFF
1,3-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 11:48	MFF
1,4-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 11:48	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0089	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 11:48	MFF
1,1-Dichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 11:48	MFF
1,2-Dichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 11:48	MFF
1,1-Dichloroethylene	ND	0.0035	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 11:48	MFF
cis-1,2-Dichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 11:48	MFF
trans-1,2-Dichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 11:48	MFF
1,2-Dichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 11:48	MFF
1,3-Dichloropropane	ND	0.00089	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 11:48	MFF
2,2-Dichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 11:48	MFF
1,1-Dichloropropene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 11:48	MFF
cis-1,3-Dichloropropene	ND	0.00089	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 11:48	MFF
trans-1,3-Dichloropropene	ND	0.00089	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 11:48	MFF
Diethyl Ether	ND	0.0089	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 11:48	MFF
Diisopropyl Ether (DIPE)	ND	0.00089	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 11:48	MFF
1,4-Dioxane	ND	0.089	mg/Kg dry	1	V-16	SW-846 8260C	3/13/19	3/13/19 11:48	MFF
Ethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 11:48	MFF

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-D7 (0-5)

Sampled: 3/11/2019 07:50

Sample ID: 19C0442-01

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 11:48	MFF
2-Hexanone (MBK)	ND	0.018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 11:48	MFF
Isopropylbenzene (Cumene)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 11:48	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 11:48	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0035	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 11:48	MFF
Methylene Chloride	ND	0.0089	mg/Kg dry	1	R-05	SW-846 8260C	3/13/19	3/13/19 11:48	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 11:48	MFF
Naphthalene	ND	0.0035	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 11:48	MFF
n-Propylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 11:48	MFF
Styrene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 11:48	MFF
1,1,1,2-Tetrachloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 11:48	MFF
1,1,2,2-Tetrachloroethane	ND	0.00089	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 11:48	MFF
Tetrachloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 11:48	MFF
Tetrahydrofuran	ND	0.0089	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 11:48	MFF
Toluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 11:48	MFF
1,2,3-Trichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 11:48	MFF
1,2,4-Trichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 11:48	MFF
1,1,1-Trichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 11:48	MFF
1,1,2-Trichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 11:48	MFF
Trichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 11:48	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0089	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 11:48	MFF
1,2,3-Trichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 11:48	MFF
1,2,4-Trimethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 11:48	MFF
1,3,5-Trimethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 11:48	MFF
Vinyl Chloride	ND	0.0089	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 11:48	MFF
m+p Xylene	ND	0.0035	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 11:48	MFF
o-Xylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 11:48	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	101	70-130	3/13/19 11:48
Toluene-d8	93.5	70-130	3/13/19 11:48
4-Bromofluorobenzene	96.2	70-130	3/13/19 11:48

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-D7 (0-5)

Sampled: 3/11/2019 07:50

Sample ID: 19C0442-01

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.38	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 16:12	IMR
Acenaphthylene	ND	0.38	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 16:12	IMR
Acetophenone	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 16:12	IMR
Aniline	ND	0.76	mg/Kg dry	2	V-34	SW-846 8270D	3/14/19	3/16/19 16:12	IMR
Anthracene	ND	0.38	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 16:12	IMR
Benzo(a)anthracene	1.0	0.38	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 16:12	IMR
Benzo(a)pyrene	1.0	0.38	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 16:12	IMR
Benzo(b)fluoranthene	1.1	0.38	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 16:12	IMR
Benzo(g,h,i)perylene	0.58	0.38	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 16:12	IMR
Benzo(k)fluoranthene	0.44	0.38	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 16:12	IMR
Bis(2-chloroethoxy)methane	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 16:12	IMR
Bis(2-chloroethyl)ether	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 16:12	IMR
Bis(2-chloroisopropyl)ether	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 16:12	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 16:12	IMR
4-Bromophenylphenylether	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 16:12	IMR
Butylbenzylphthalate	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 16:12	IMR
4-Chloroaniline	ND	1.5	mg/Kg dry	2	V-34	SW-846 8270D	3/14/19	3/16/19 16:12	IMR
2-Chloronaphthalene	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 16:12	IMR
2-Chlorophenol	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 16:12	IMR
Chrysene	1.1	0.38	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 16:12	IMR
Dibenz(a,h)anthracene	ND	0.38	mg/Kg dry	2	V-20	SW-846 8270D	3/14/19	3/16/19 16:12	IMR
Dibenzofuran	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 16:12	IMR
Di-n-butylphthalate	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 16:12	IMR
1,2-Dichlorobenzene	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 16:12	IMR
1,3-Dichlorobenzene	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 16:12	IMR
1,4-Dichlorobenzene	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 16:12	IMR
3,3-Dichlorobenzidine	ND	0.38	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 16:12	IMR
2,4-Dichlorophenol	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 16:12	IMR
Diethylphthalate	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 16:12	IMR
2,4-Dimethylphenol	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 16:12	IMR
Dimethylphthalate	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 16:12	IMR
2,4-Dinitrophenol	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 16:12	IMR
2,4-Dinitrotoluene	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 16:12	IMR
2,6-Dinitrotoluene	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 16:12	IMR
Di-n-octylphthalate	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 16:12	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 16:12	IMR
Fluoranthene	2.0	0.38	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 16:12	IMR
Fluorene	ND	0.38	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 16:12	IMR
Hexachlorobenzene	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 16:12	IMR
Hexachlorobutadiene	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 16:12	IMR
Hexachloroethane	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 16:12	IMR
Indeno(1,2,3-cd)pyrene	0.67	0.38	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 16:12	IMR
Isophorone	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 16:12	IMR
2-Methylnaphthalene	ND	0.38	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 16:12	IMR

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-D7 (0-5)

Sampled: 3/11/2019 07:50

Sample ID: 19C0442-01

Sample Matrix: Soil

Sample Flags: RL-08

**Semivolatile Organic Compounds by GC/MS**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 16:12	IMR
3/4-Methylphenol	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 16:12	IMR
Naphthalene	ND	0.38	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 16:12	IMR
Nitrobenzene	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 16:12	IMR
2-Nitrophenol	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 16:12	IMR
4-Nitrophenol	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 16:12	IMR
Pentachlorophenol	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 16:12	IMR
Phenanthrene	1.3	0.38	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 16:12	IMR
Phenol	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 16:12	IMR
Pyrene	2.2	0.38	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 16:12	IMR
1,2,4-Trichlorobenzene	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 16:12	IMR
2,4,5-Trichlorophenol	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 16:12	IMR
2,4,6-Trichlorophenol	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 16:12	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	73.7	30-130	
Phenol-d6	71.3	30-130	
Nitrobenzene-d5	74.8	30-130	
2-Fluorobiphenyl	78.7	30-130	
2,4,6-Tribromophenol	80.0	30-130	
p-Terphenyl-d14	91.0	30-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-D7 (0-5)

Sampled: 3/11/2019 07:50

Sample ID: 19C0442-01

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.088	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 19:54	JMB
Aroclor-1221 [1]	ND	0.088	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 19:54	JMB
Aroclor-1232 [1]	ND	0.088	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 19:54	JMB
Aroclor-1242 [1]	ND	0.088	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 19:54	JMB
Aroclor-1248 [1]	ND	0.088	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 19:54	JMB
Aroclor-1254 [1]	ND	0.088	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 19:54	JMB
Aroclor-1260 [1]	ND	0.088	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 19:54	JMB
Aroclor-1262 [1]	ND	0.088	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 19:54	JMB
Aroclor-1268 [1]	ND	0.088	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 19:54	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		90.2	30-150					3/14/19 19:54	
Decachlorobiphenyl [2]		96.0	30-150					3/14/19 19:54	
Tetrachloro-m-xylene [1]		94.6	30-150					3/14/19 19:54	
Tetrachloro-m-xylene [2]		95.8	30-150					3/14/19 19:54	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-D7 (0-5)

Sampled: 3/11/2019 07:50

Sample ID: 19C0442-01

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	330	94	mg/Kg dry	10		SW-846 8100 Modified	3/14/19	3/17/19 12:17	RMW
<b>Surrogates</b>		<b>% Recovery</b>	<b>Recovery Limits</b>		<b>Flag/Qual</b>				
2-Fluorobiphenyl		46.3	40-140					3/17/19 12:17	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-D7 (0-5)

Sampled: 3/11/2019 07:50

Sample ID: 19C0442-01

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.9	mg/Kg dry	1	M-07	SW-846 6010D	3/13/19	3/14/19 13:14	QNW
Arsenic	6.1	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 13:14	QNW
Barium	34	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 13:14	QNW
Beryllium	0.32	0.19	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 13:14	QNW
Cadmium	0.41	0.19	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 13:14	QNW
Chromium	15	0.38	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 13:14	QNW
Lead	71	0.57	mg/Kg dry	1	MS-14	SW-846 6010D	3/13/19	3/14/19 13:14	QNW
Mercury	0.079	0.029	mg/Kg dry	1		SW-846 7471B	3/13/19	3/14/19 12:10	TBC
Nickel	10	0.38	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 13:14	QNW
Selenium	ND	3.8	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 13:14	QNW
Silver	ND	0.38	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 13:14	QNW
Thallium	ND	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 13:14	QNW
Vanadium	20	0.76	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 13:14	QNW
Zinc	54	0.76	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 13:14	QNW

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-D7 (0-5)

Sampled: 3/11/2019 07:50

Sample ID: 19C0442-01

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	87.3		% Wt	1		SM 2540G	3/18/19	3/18/19 15:48	VLH
Ignitability	Absent		present/absent	1		SW-846 1030	3/13/19	3/13/19 16:45	DJM
pH @20.5°C	7.7		pH Units	1	H-03	SW-846 9045C	3/13/19	3/13/19 10:50	IS
Reactive Cyanide	ND	4.0	mg/Kg	1		SW-846 9014	3/13/19	3/14/19 11:20	DJM
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	3/13/19	3/14/19 10:45	DJM
Specific conductance	11	2.0	µmhos/cm	1		SM21-22 2510B	3/13/19	3/13/19 12:58	KMV



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

Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-D7 (5-10)

Sampled: 3/11/2019 07:55

Sample ID: 19C0442-02

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.075	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:27	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00075	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:27	MFF
Benzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:27	MFF
Bromobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:27	MFF
Bromochloromethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:27	MFF
Bromodichloromethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:27	MFF
Bromoform	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:27	MFF
Bromomethane	ND	0.0075	mg/Kg dry	1	V-34	SW-846 8260C	3/13/19	3/14/19 7:27	MFF
2-Butanone (MEK)	ND	0.030	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:27	MFF
n-Butylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:27	MFF
sec-Butylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:27	MFF
tert-Butylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:27	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00075	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:27	MFF
Carbon Disulfide	ND	0.0045	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:27	MFF
Carbon Tetrachloride	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:27	MFF
Chlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:27	MFF
Chlorodibromomethane	ND	0.00075	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:27	MFF
Chloroethane	ND	0.0075	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:27	MFF
Chloroform	ND	0.0030	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:27	MFF
Chloromethane	ND	0.0075	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:27	MFF
2-Chlorotoluene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:27	MFF
4-Chlorotoluene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:27	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:27	MFF
1,2-Dibromoethane (EDB)	ND	0.00075	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:27	MFF
Dibromomethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:27	MFF
1,2-Dichlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:27	MFF
1,3-Dichlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:27	MFF
1,4-Dichlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:27	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0075	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:27	MFF
1,1-Dichloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:27	MFF
1,2-Dichloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:27	MFF
1,1-Dichloroethylene	ND	0.0030	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:27	MFF
cis-1,2-Dichloroethylene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:27	MFF
trans-1,2-Dichloroethylene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:27	MFF
1,2-Dichloropropane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:27	MFF
1,3-Dichloropropane	ND	0.00075	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:27	MFF
2,2-Dichloropropane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:27	MFF
1,1-Dichloropropene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:27	MFF
cis-1,3-Dichloropropene	ND	0.00075	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:27	MFF
trans-1,3-Dichloropropene	ND	0.00075	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:27	MFF
Diethyl Ether	ND	0.0075	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:27	MFF
Diisopropyl Ether (DIPE)	ND	0.00075	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:27	MFF
1,4-Dioxane	ND	0.075	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:27	MFF
Ethylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:27	MFF

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-D7 (5-10)

Sampled: 3/11/2019 07:55

Sample ID: 19C0442-02

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:27	MFF
2-Hexanone (MBK)	ND	0.015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:27	MFF
Isopropylbenzene (Cumene)	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:27	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:27	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0030	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:27	MFF
Methylene Chloride	ND	0.0075	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:27	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:27	MFF
Naphthalene	ND	0.0030	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:27	MFF
n-Propylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:27	MFF
Styrene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:27	MFF
1,1,1,2-Tetrachloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:27	MFF
1,1,2,2-Tetrachloroethane	ND	0.00075	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:27	MFF
Tetrachloroethylene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:27	MFF
Tetrahydrofuran	ND	0.0075	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:27	MFF
Toluene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:27	MFF
1,2,3-Trichlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:27	MFF
1,2,4-Trichlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:27	MFF
1,1,1-Trichloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:27	MFF
1,1,2-Trichloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:27	MFF
Trichloroethylene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:27	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0075	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:27	MFF
1,2,3-Trichloropropane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:27	MFF
1,2,4-Trimethylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:27	MFF
1,3,5-Trimethylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:27	MFF
Vinyl Chloride	ND	0.0075	mg/Kg dry	1	L-04	SW-846 8260C	3/13/19	3/14/19 7:27	MFF
m+p Xylene	ND	0.0030	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:27	MFF
o-Xylene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:27	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	98.1	70-130	
Toluene-d8	91.7	70-130	
4-Bromofluorobenzene	96.0	70-130	

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-D7 (5-10)

Sampled: 3/11/2019 07:55

Sample ID: 19C0442-02

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatle Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	1.9	mg/Kg dry	10		SW-846 8270D	3/14/19	3/16/19 17:43	IMR
Acenaphthylene	ND	1.9	mg/Kg dry	10		SW-846 8270D	3/14/19	3/16/19 17:43	IMR
Acetophenone	ND	3.7	mg/Kg dry	10		SW-846 8270D	3/14/19	3/16/19 17:43	IMR
Aniline	ND	3.7	mg/Kg dry	10	V-34	SW-846 8270D	3/14/19	3/16/19 17:43	IMR
Anthracene	ND	1.9	mg/Kg dry	10		SW-846 8270D	3/14/19	3/16/19 17:43	IMR
Benzo(a)anthracene	ND	1.9	mg/Kg dry	10		SW-846 8270D	3/14/19	3/16/19 17:43	IMR
Benzo(a)pyrene	ND	1.9	mg/Kg dry	10		SW-846 8270D	3/14/19	3/16/19 17:43	IMR
Benzo(b)fluoranthene	ND	1.9	mg/Kg dry	10		SW-846 8270D	3/14/19	3/16/19 17:43	IMR
Benzo(g,h,i)perylene	ND	1.9	mg/Kg dry	10		SW-846 8270D	3/14/19	3/16/19 17:43	IMR
Benzo(k)fluoranthene	ND	1.9	mg/Kg dry	10		SW-846 8270D	3/14/19	3/16/19 17:43	IMR
Bis(2-chloroethoxy)methane	ND	3.7	mg/Kg dry	10		SW-846 8270D	3/14/19	3/16/19 17:43	IMR
Bis(2-chloroethyl)ether	ND	3.7	mg/Kg dry	10		SW-846 8270D	3/14/19	3/16/19 17:43	IMR
Bis(2-chloroisopropyl)ether	ND	3.7	mg/Kg dry	10		SW-846 8270D	3/14/19	3/16/19 17:43	IMR
Bis(2-Ethylhexyl)phthalate	ND	3.7	mg/Kg dry	10		SW-846 8270D	3/14/19	3/16/19 17:43	IMR
4-Bromophenylphenylether	ND	3.7	mg/Kg dry	10		SW-846 8270D	3/14/19	3/16/19 17:43	IMR
Butylbenzylphthalate	ND	3.7	mg/Kg dry	10		SW-846 8270D	3/14/19	3/16/19 17:43	IMR
4-Chloroaniline	ND	7.2	mg/Kg dry	10	V-34	SW-846 8270D	3/14/19	3/16/19 17:43	IMR
2-Chloronaphthalene	ND	3.7	mg/Kg dry	10		SW-846 8270D	3/14/19	3/16/19 17:43	IMR
2-Chlorophenol	ND	3.7	mg/Kg dry	10		SW-846 8270D	3/14/19	3/16/19 17:43	IMR
Chrysene	ND	1.9	mg/Kg dry	10		SW-846 8270D	3/14/19	3/16/19 17:43	IMR
Dibenz(a,h)anthracene	ND	1.9	mg/Kg dry	10	V-20	SW-846 8270D	3/14/19	3/16/19 17:43	IMR
Dibenzofuran	ND	3.7	mg/Kg dry	10		SW-846 8270D	3/14/19	3/16/19 17:43	IMR
Di-n-butylphthalate	ND	3.7	mg/Kg dry	10		SW-846 8270D	3/14/19	3/16/19 17:43	IMR
1,2-Dichlorobenzene	ND	3.7	mg/Kg dry	10		SW-846 8270D	3/14/19	3/16/19 17:43	IMR
1,3-Dichlorobenzene	ND	3.7	mg/Kg dry	10		SW-846 8270D	3/14/19	3/16/19 17:43	IMR
1,4-Dichlorobenzene	ND	3.7	mg/Kg dry	10		SW-846 8270D	3/14/19	3/16/19 17:43	IMR
3,3-Dichlorobenzidine	ND	1.9	mg/Kg dry	10		SW-846 8270D	3/14/19	3/16/19 17:43	IMR
2,4-Dichlorophenol	ND	3.7	mg/Kg dry	10		SW-846 8270D	3/14/19	3/16/19 17:43	IMR
Diethylphthalate	ND	3.7	mg/Kg dry	10		SW-846 8270D	3/14/19	3/16/19 17:43	IMR
2,4-Dimethylphenol	ND	3.7	mg/Kg dry	10		SW-846 8270D	3/14/19	3/16/19 17:43	IMR
Dimethylphthalate	ND	3.7	mg/Kg dry	10		SW-846 8270D	3/14/19	3/16/19 17:43	IMR
2,4-Dinitrophenol	ND	7.2	mg/Kg dry	10		SW-846 8270D	3/14/19	3/16/19 17:43	IMR
2,4-Dinitrotoluene	ND	3.7	mg/Kg dry	10		SW-846 8270D	3/14/19	3/16/19 17:43	IMR
2,6-Dinitrotoluene	ND	3.7	mg/Kg dry	10		SW-846 8270D	3/14/19	3/16/19 17:43	IMR
Di-n-octylphthalate	ND	3.7	mg/Kg dry	10		SW-846 8270D	3/14/19	3/16/19 17:43	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	3.7	mg/Kg dry	10		SW-846 8270D	3/14/19	3/16/19 17:43	IMR
Fluoranthene	2.9	1.9	mg/Kg dry	10		SW-846 8270D	3/14/19	3/16/19 17:43	IMR
Fluorene	ND	1.9	mg/Kg dry	10		SW-846 8270D	3/14/19	3/16/19 17:43	IMR
Hexachlorobenzene	ND	3.7	mg/Kg dry	10		SW-846 8270D	3/14/19	3/16/19 17:43	IMR
Hexachlorobutadiene	ND	3.7	mg/Kg dry	10		SW-846 8270D	3/14/19	3/16/19 17:43	IMR
Hexachloroethane	ND	3.7	mg/Kg dry	10		SW-846 8270D	3/14/19	3/16/19 17:43	IMR
Indeno(1,2,3-cd)pyrene	ND	1.9	mg/Kg dry	10		SW-846 8270D	3/14/19	3/16/19 17:43	IMR
Isophorone	ND	3.7	mg/Kg dry	10		SW-846 8270D	3/14/19	3/16/19 17:43	IMR
2-Methylnaphthalene	ND	1.9	mg/Kg dry	10		SW-846 8270D	3/14/19	3/16/19 17:43	IMR

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-D7 (5-10)

Sampled: 3/11/2019 07:55

Sample ID: 19C0442-02

Sample Matrix: Soil

Sample Flags: RL-08

**Semivolatile Organic Compounds by GC/MS**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	3.7	mg/Kg dry	10		SW-846 8270D	3/14/19	3/16/19 17:43	IMR
3/4-Methylphenol	ND	3.7	mg/Kg dry	10		SW-846 8270D	3/14/19	3/16/19 17:43	IMR
Naphthalene	ND	1.9	mg/Kg dry	10		SW-846 8270D	3/14/19	3/16/19 17:43	IMR
Nitrobenzene	ND	3.7	mg/Kg dry	10		SW-846 8270D	3/14/19	3/16/19 17:43	IMR
2-Nitrophenol	ND	3.7	mg/Kg dry	10		SW-846 8270D	3/14/19	3/16/19 17:43	IMR
4-Nitrophenol	ND	7.2	mg/Kg dry	10		SW-846 8270D	3/14/19	3/16/19 17:43	IMR
Pentachlorophenol	ND	3.7	mg/Kg dry	10		SW-846 8270D	3/14/19	3/16/19 17:43	IMR
Phenanthrene	2.2	1.9	mg/Kg dry	10		SW-846 8270D	3/14/19	3/16/19 17:43	IMR
Phenol	ND	3.7	mg/Kg dry	10		SW-846 8270D	3/14/19	3/16/19 17:43	IMR
Pyrene	3.0	1.9	mg/Kg dry	10		SW-846 8270D	3/14/19	3/16/19 17:43	IMR
1,2,4-Trichlorobenzene	ND	3.7	mg/Kg dry	10		SW-846 8270D	3/14/19	3/16/19 17:43	IMR
2,4,5-Trichlorophenol	ND	3.7	mg/Kg dry	10		SW-846 8270D	3/14/19	3/16/19 17:43	IMR
2,4,6-Trichlorophenol	ND	3.7	mg/Kg dry	10		SW-846 8270D	3/14/19	3/16/19 17:43	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	57.0	30-130	
Phenol-d6	57.2	30-130	
Nitrobenzene-d5	59.8	30-130	
2-Fluorobiphenyl	64.7	30-130	
2,4,6-Tribromophenol	64.6	30-130	
p-Terphenyl-d14	73.5	30-130	

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-D7 (5-10)

Sampled: 3/11/2019 07:55

Sample ID: 19C0442-02

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 20:12	JMB
Aroclor-1221 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 20:12	JMB
Aroclor-1232 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 20:12	JMB
Aroclor-1242 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 20:12	JMB
Aroclor-1248 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 20:12	JMB
Aroclor-1254 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 20:12	JMB
Aroclor-1260 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 20:12	JMB
Aroclor-1262 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 20:12	JMB
Aroclor-1268 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 20:12	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		84.2	30-150					3/14/19 20:12	
Decachlorobiphenyl [2]		86.6	30-150					3/14/19 20:12	
Tetrachloro-m-xylene [1]		93.1	30-150					3/14/19 20:12	
Tetrachloro-m-xylene [2]		95.8	30-150					3/14/19 20:12	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-D7 (5-10)

Sampled: 3/11/2019 07:55

Sample ID: 19C0442-02

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	1000	180	mg/Kg dry	20		SW-846 8100 Modified	3/14/19	3/17/19 12:37	RMW
<b>Surrogates</b>		<b>% Recovery</b>	<b>Recovery Limits</b>		<b>Flag/Qual</b>				
2-Fluorobiphenyl		*	40-140		S-01			3/17/19 12:37	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-D7 (5-10)

Sampled: 3/11/2019 07:55

Sample ID: 19C0442-02

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 12:28	QNW
Arsenic	4.8	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 12:28	QNW
Barium	34	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 12:28	QNW
Beryllium	0.29	0.19	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 12:28	QNW
Cadmium	0.39	0.19	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 12:28	QNW
Chromium	17	0.38	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 12:28	QNW
Lead	40	0.56	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 12:28	QNW
Mercury	0.038	0.028	mg/Kg dry	1		SW-846 7471B	3/13/19	3/14/19 12:12	TBC
Nickel	13	0.38	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 12:28	QNW
Selenium	ND	3.8	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 12:28	QNW
Silver	ND	0.38	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 12:28	QNW
Thallium	ND	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 12:28	QNW
Vanadium	25	0.75	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 12:28	QNW
Zinc	51	0.75	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 12:28	QNW

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-D7 (5-10)

Sampled: 3/11/2019 07:55

Sample ID: 19C0442-02

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	89.0		% Wt	1		SM 2540G	3/18/19	3/18/19 15:49	VLH
Ignitability	Absent		present/absent	1		SW-846 1030	3/13/19	3/13/19 16:45	DJM
pH @20.2°C	8.2		pH Units	1	H-03	SW-846 9045C	3/13/19	3/13/19 10:50	IS
Reactive Cyanide	ND	4.0	mg/Kg	1		SW-846 9014	3/13/19	3/14/19 11:20	DJM
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	3/13/19	3/14/19 10:45	DJM
Specific conductance	18	2.0	µmhos/cm	1		SM21-22 2510B	3/13/19	3/13/19 12:58	KMV



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-D6 (0-5)

Sampled: 3/11/2019 08:20

Sample ID: 19C0442-03

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.085	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 12:38	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00085	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 12:38	MFF
Benzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 12:38	MFF
Bromobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 12:38	MFF
Bromochloromethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 12:38	MFF
Bromodichloromethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 12:38	MFF
Bromoform	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 12:38	MFF
Bromomethane	ND	0.0085	mg/Kg dry	1	V-34	SW-846 8260C	3/13/19	3/13/19 12:38	MFF
2-Butanone (MEK)	ND	0.034	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 12:38	MFF
n-Butylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 12:38	MFF
sec-Butylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 12:38	MFF
tert-Butylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 12:38	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00085	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 12:38	MFF
Carbon Disulfide	ND	0.0051	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 12:38	MFF
Carbon Tetrachloride	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 12:38	MFF
Chlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 12:38	MFF
Chlorodibromomethane	ND	0.00085	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 12:38	MFF
Chloroethane	ND	0.0085	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 12:38	MFF
Chloroform	ND	0.0034	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 12:38	MFF
Chloromethane	ND	0.0085	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 12:38	MFF
2-Chlorotoluene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 12:38	MFF
4-Chlorotoluene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 12:38	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 12:38	MFF
1,2-Dibromoethane (EDB)	ND	0.00085	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 12:38	MFF
Dibromomethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 12:38	MFF
1,2-Dichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 12:38	MFF
1,3-Dichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 12:38	MFF
1,4-Dichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 12:38	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0085	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 12:38	MFF
1,1-Dichloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 12:38	MFF
1,2-Dichloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 12:38	MFF
1,1-Dichloroethylene	ND	0.0034	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 12:38	MFF
cis-1,2-Dichloroethylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 12:38	MFF
trans-1,2-Dichloroethylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 12:38	MFF
1,2-Dichloropropane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 12:38	MFF
1,3-Dichloropropane	ND	0.00085	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 12:38	MFF
2,2-Dichloropropane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 12:38	MFF
1,1-Dichloropropene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 12:38	MFF
cis-1,3-Dichloropropene	ND	0.00085	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 12:38	MFF
trans-1,3-Dichloropropene	ND	0.00085	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 12:38	MFF
Diethyl Ether	ND	0.0085	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 12:38	MFF
Diisopropyl Ether (DIPE)	ND	0.00085	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 12:38	MFF
1,4-Dioxane	ND	0.085	mg/Kg dry	1	V-16	SW-846 8260C	3/13/19	3/13/19 12:38	MFF
Ethylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 12:38	MFF

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-D6 (0-5)

Sampled: 3/11/2019 08:20

Sample ID: 19C0442-03

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 12:38	MFF
2-Hexanone (MBK)	ND	0.017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 12:38	MFF
Isopropylbenzene (Cumene)	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 12:38	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 12:38	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0034	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 12:38	MFF
Methylene Chloride	ND	0.0085	mg/Kg dry	1	R-05	SW-846 8260C	3/13/19	3/13/19 12:38	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 12:38	MFF
Naphthalene	ND	0.0034	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 12:38	MFF
n-Propylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 12:38	MFF
Styrene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 12:38	MFF
1,1,1,2-Tetrachloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 12:38	MFF
1,1,2,2-Tetrachloroethane	ND	0.00085	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 12:38	MFF
Tetrachloroethylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 12:38	MFF
Tetrahydrofuran	ND	0.0085	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 12:38	MFF
Toluene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 12:38	MFF
1,2,3-Trichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 12:38	MFF
1,2,4-Trichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 12:38	MFF
1,1,1-Trichloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 12:38	MFF
1,1,2-Trichloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 12:38	MFF
Trichloroethylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 12:38	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0085	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 12:38	MFF
1,2,3-Trichloropropane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 12:38	MFF
1,2,4-Trimethylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 12:38	MFF
1,3,5-Trimethylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 12:38	MFF
Vinyl Chloride	ND	0.0085	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 12:38	MFF
m+p Xylene	ND	0.0034	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 12:38	MFF
o-Xylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 12:38	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	99.2	70-130	
Toluene-d8	94.4	70-130	
4-Bromofluorobenzene	95.2	70-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-D6 (0-5)

Sampled: 3/11/2019 08:20

Sample ID: 19C0442-03

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatle Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.97	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:10	IMR
Acenaphthylene	ND	0.97	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:10	IMR
Acetophenone	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:10	IMR
Aniline	ND	1.9	mg/Kg dry	5	V-34	SW-846 8270D	3/14/19	3/16/19 18:10	IMR
Anthracene	ND	0.97	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:10	IMR
Benzo(a)anthracene	ND	0.97	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:10	IMR
Benzo(a)pyrene	ND	0.97	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:10	IMR
Benzo(b)fluoranthene	ND	0.97	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:10	IMR
Benzo(g,h,i)perylene	ND	0.97	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:10	IMR
Benzo(k)fluoranthene	ND	0.97	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:10	IMR
Bis(2-chloroethoxy)methane	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:10	IMR
Bis(2-chloroethyl)ether	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:10	IMR
Bis(2-chloroisopropyl)ether	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:10	IMR
Bis(2-Ethylhexyl)phthalate	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:10	IMR
4-Bromophenylphenylether	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:10	IMR
Butylbenzylphthalate	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:10	IMR
4-Chloroaniline	ND	3.8	mg/Kg dry	5	V-34	SW-846 8270D	3/14/19	3/16/19 18:10	IMR
2-Chloronaphthalene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:10	IMR
2-Chlorophenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:10	IMR
Chrysene	ND	0.97	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:10	IMR
Dibenz(a,h)anthracene	ND	0.97	mg/Kg dry	5	V-20	SW-846 8270D	3/14/19	3/16/19 18:10	IMR
Dibenzofuran	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:10	IMR
Di-n-butylphthalate	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:10	IMR
1,2-Dichlorobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:10	IMR
1,3-Dichlorobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:10	IMR
1,4-Dichlorobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:10	IMR
3,3-Dichlorobenzidine	ND	0.97	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:10	IMR
2,4-Dichlorophenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:10	IMR
Diethylphthalate	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:10	IMR
2,4-Dimethylphenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:10	IMR
Dimethylphthalate	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:10	IMR
2,4-Dinitrophenol	ND	3.8	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:10	IMR
2,4-Dinitrotoluene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:10	IMR
2,6-Dinitrotoluene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:10	IMR
Di-n-octylphthalate	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:10	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:10	IMR
Fluoranthene	ND	0.97	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:10	IMR
Fluorene	ND	0.97	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:10	IMR
Hexachlorobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:10	IMR
Hexachlorobutadiene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:10	IMR
Hexachloroethane	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:10	IMR
Indeno(1,2,3-cd)pyrene	ND	0.97	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:10	IMR
Isophorone	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:10	IMR
2-Methylnaphthalene	ND	0.97	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:10	IMR

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-D6 (0-5)

Sampled: 3/11/2019 08:20

Sample ID: 19C0442-03

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:10	IMR
3/4-Methylphenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:10	IMR
Naphthalene	ND	0.97	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:10	IMR
Nitrobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:10	IMR
2-Nitrophenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:10	IMR
4-Nitrophenol	ND	3.8	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:10	IMR
Pentachlorophenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:10	IMR
Phenanthrene	ND	0.97	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:10	IMR
Phenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:10	IMR
Pyrene	ND	0.97	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:10	IMR
1,2,4-Trichlorobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:10	IMR
2,4,5-Trichlorophenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:10	IMR
2,4,6-Trichlorophenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:10	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	105	30-130	
Phenol-d6	104	30-130	
Nitrobenzene-d5	105	30-130	
2-Fluorobiphenyl	113	30-130	
2,4,6-Tribromophenol	113	30-130	
p-Terphenyl-d14	122	30-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-D6 (0-5)

Sampled: 3/11/2019 08:20

Sample ID: 19C0442-03

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.093	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 20:30	JMB
Aroclor-1221 [1]	ND	0.093	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 20:30	JMB
Aroclor-1232 [1]	ND	0.093	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 20:30	JMB
Aroclor-1242 [1]	ND	0.093	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 20:30	JMB
Aroclor-1248 [1]	ND	0.093	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 20:30	JMB
Aroclor-1254 [1]	ND	0.093	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 20:30	JMB
Aroclor-1260 [1]	ND	0.093	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 20:30	JMB
Aroclor-1262 [1]	ND	0.093	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 20:30	JMB
Aroclor-1268 [1]	ND	0.093	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 20:30	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		85.9	30-150					3/14/19 20:30	
Decachlorobiphenyl [2]		86.2	30-150					3/14/19 20:30	
Tetrachloro-m-xylene [1]		92.3	30-150					3/14/19 20:30	
Tetrachloro-m-xylene [2]		93.4	30-150					3/14/19 20:30	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-D6 (0-5)

Sampled: 3/11/2019 08:20

Sample ID: 19C0442-03

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	590	190	mg/Kg dry	20		SW-846 8100 Modified	3/14/19	3/17/19 12:57	RMW
<b>Surrogates</b>		<b>% Recovery</b>	<b>Recovery Limits</b>		<b>Flag/Qual</b>				
2-Fluorobiphenyl		*	40-140		S-01			3/17/19 12:57	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-D6 (0-5)

Sampled: 3/11/2019 08:20

Sample ID: 19C0442-03

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	2.0	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 13:19	QNW
Arsenic	6.8	2.0	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 13:19	QNW
Barium	46	2.0	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 13:19	QNW
Beryllium	0.34	0.20	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 13:19	QNW
Cadmium	0.44	0.20	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 13:19	QNW
Chromium	13	0.39	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 13:19	QNW
Lead	110	0.59	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 13:19	QNW
Mercury	0.11	0.029	mg/Kg dry	1		SW-846 7471B	3/13/19	3/14/19 12:14	TBC
Nickel	9.9	0.39	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 13:19	QNW
Selenium	ND	3.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 13:19	QNW
Silver	ND	0.39	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 13:19	QNW
Thallium	ND	2.0	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 13:19	QNW
Vanadium	19	0.78	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 13:19	QNW
Zinc	56	0.78	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 13:19	QNW

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-D6 (0-5)

Sampled: 3/11/2019 08:20

Sample ID: 19C0442-03

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	85.5		% Wt	1		SM 2540G	3/18/19	3/18/19 15:49	VLH
Ignitability	Absent		present/absent	1		SW-846 1030	3/13/19	3/13/19 16:45	DJM
pH @19.9°C	7.7		pH Units	1	H-03	SW-846 9045C	3/13/19	3/13/19 10:50	IS
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	3/13/19	3/14/19 11:20	DJM
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	3/13/19	3/14/19 10:45	DJM
Specific conductance	9.0	2.0	µmhos/cm	1		SM21-22 2510B	3/13/19	3/13/19 12:58	KMV



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-D6 (5-10)

Sampled: 3/11/2019 08:25

Sample ID: 19C0442-04

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.089	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:02	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00089	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:02	MFF
Benzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:02	MFF
Bromobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:02	MFF
Bromochloromethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:02	MFF
Bromodichloromethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:02	MFF
Bromoform	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:02	MFF
Bromomethane	ND	0.0089	mg/Kg dry	1	V-34	SW-846 8260C	3/13/19	3/13/19 13:02	MFF
2-Butanone (MEK)	ND	0.036	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:02	MFF
n-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:02	MFF
sec-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:02	MFF
tert-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:02	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00089	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:02	MFF
Carbon Disulfide	ND	0.0053	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:02	MFF
Carbon Tetrachloride	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:02	MFF
Chlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:02	MFF
Chlorodibromomethane	ND	0.00089	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:02	MFF
Chloroethane	ND	0.0089	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:02	MFF
Chloroform	ND	0.0036	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:02	MFF
Chloromethane	ND	0.0089	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:02	MFF
2-Chlorotoluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:02	MFF
4-Chlorotoluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:02	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:02	MFF
1,2-Dibromoethane (EDB)	ND	0.00089	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:02	MFF
Dibromomethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:02	MFF
1,2-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:02	MFF
1,3-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:02	MFF
1,4-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:02	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0089	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:02	MFF
1,1-Dichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:02	MFF
1,2-Dichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:02	MFF
1,1-Dichloroethylene	ND	0.0036	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:02	MFF
cis-1,2-Dichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:02	MFF
trans-1,2-Dichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:02	MFF
1,2-Dichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:02	MFF
1,3-Dichloropropane	ND	0.00089	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:02	MFF
2,2-Dichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:02	MFF
1,1-Dichloropropene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:02	MFF
cis-1,3-Dichloropropene	ND	0.00089	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:02	MFF
trans-1,3-Dichloropropene	ND	0.00089	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:02	MFF
Diethyl Ether	ND	0.0089	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:02	MFF
Diisopropyl Ether (DIPE)	ND	0.00089	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:02	MFF
1,4-Dioxane	ND	0.089	mg/Kg dry	1	V-16	SW-846 8260C	3/13/19	3/13/19 13:02	MFF
Ethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:02	MFF

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-D6 (5-10)

Sampled: 3/11/2019 08:25

Sample ID: 19C0442-04

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:02	MFF
2-Hexanone (MBK)	ND	0.018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:02	MFF
Isopropylbenzene (Cumene)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:02	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:02	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0036	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:02	MFF
Methylene Chloride	ND	0.0089	mg/Kg dry	1	R-05	SW-846 8260C	3/13/19	3/13/19 13:02	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:02	MFF
Naphthalene	ND	0.0036	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:02	MFF
n-Propylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:02	MFF
Styrene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:02	MFF
1,1,1,2-Tetrachloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:02	MFF
1,1,2,2-Tetrachloroethane	ND	0.00089	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:02	MFF
Tetrachloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:02	MFF
Tetrahydrofuran	ND	0.0089	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:02	MFF
Toluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:02	MFF
1,2,3-Trichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:02	MFF
1,2,4-Trichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:02	MFF
1,1,1-Trichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:02	MFF
1,1,2-Trichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:02	MFF
Trichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:02	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0089	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:02	MFF
1,2,3-Trichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:02	MFF
1,2,4-Trimethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:02	MFF
1,3,5-Trimethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:02	MFF
Vinyl Chloride	ND	0.0089	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:02	MFF
m+p Xylene	ND	0.0036	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:02	MFF
o-Xylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:02	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	100	70-130	
Toluene-d8	93.8	70-130	
4-Bromofluorobenzene	93.4	70-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-D6 (5-10)

Sampled: 3/11/2019 08:25

Sample ID: 19C0442-04

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	1.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 16:43	IMR
Acenaphthylene	ND	1.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 16:43	IMR
Acetophenone	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 16:43	IMR
Aniline	ND	2.0	mg/Kg dry	5	MS-09, V-34	SW-846 8270D	3/14/19	3/16/19 16:43	IMR
Anthracene	1.5	1.0	mg/Kg dry	5	MS-09	SW-846 8270D	3/14/19	3/16/19 16:43	IMR
Benzo(a)anthracene	3.5	1.0	mg/Kg dry	5	MS-09	SW-846 8270D	3/14/19	3/16/19 16:43	IMR
Benzo(a)pyrene	3.2	1.0	mg/Kg dry	5	MS-09	SW-846 8270D	3/14/19	3/16/19 16:43	IMR
Benzo(b)fluoranthene	3.8	1.0	mg/Kg dry	5	MS-09	SW-846 8270D	3/14/19	3/16/19 16:43	IMR
Benzo(g,h,i)perylene	1.3	1.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 16:43	IMR
Benzo(k)fluoranthene	1.4	1.0	mg/Kg dry	5	MS-09	SW-846 8270D	3/14/19	3/16/19 16:43	IMR
Bis(2-chloroethoxy)methane	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 16:43	IMR
Bis(2-chloroethyl)ether	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 16:43	IMR
Bis(2-chloroisopropyl)ether	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 16:43	IMR
Bis(2-Ethylhexyl)phthalate	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 16:43	IMR
4-Bromophenylphenylether	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 16:43	IMR
Butylbenzylphthalate	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 16:43	IMR
4-Chloroaniline	ND	3.9	mg/Kg dry	5	V-34	SW-846 8270D	3/14/19	3/16/19 16:43	IMR
2-Chloronaphthalene	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 16:43	IMR
2-Chlorophenol	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 16:43	IMR
Chrysene	3.2	1.0	mg/Kg dry	5	MS-09	SW-846 8270D	3/14/19	3/16/19 16:43	IMR
Dibenz(a,h)anthracene	ND	1.0	mg/Kg dry	5	V-20	SW-846 8270D	3/14/19	3/16/19 16:43	IMR
Dibenzofuran	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 16:43	IMR
Di-n-butylphthalate	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 16:43	IMR
1,2-Dichlorobenzene	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 16:43	IMR
1,3-Dichlorobenzene	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 16:43	IMR
1,4-Dichlorobenzene	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 16:43	IMR
3,3-Dichlorobenzidine	ND	1.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 16:43	IMR
2,4-Dichlorophenol	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 16:43	IMR
Diethylphthalate	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 16:43	IMR
2,4-Dimethylphenol	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 16:43	IMR
Dimethylphthalate	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 16:43	IMR
2,4-Dinitrophenol	ND	3.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 16:43	IMR
2,4-Dinitrotoluene	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 16:43	IMR
2,6-Dinitrotoluene	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 16:43	IMR
Di-n-octylphthalate	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 16:43	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 16:43	IMR
Fluoranthene	8.4	1.0	mg/Kg dry	5	MS-09, R-06	SW-846 8270D	3/14/19	3/16/19 16:43	IMR
Fluorene	ND	1.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 16:43	IMR
Hexachlorobenzene	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 16:43	IMR
Hexachlorobutadiene	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 16:43	IMR
Hexachloroethane	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 16:43	IMR
Indeno(1,2,3-cd)pyrene	1.6	1.0	mg/Kg dry	5	MS-09	SW-846 8270D	3/14/19	3/16/19 16:43	IMR
Isophorone	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 16:43	IMR
2-Methylnaphthalene	ND	1.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 16:43	IMR

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-D6 (5-10)

Sampled: 3/11/2019 08:25

Sample ID: 19C0442-04

Sample Matrix: Soil

Sample Flags: RL-08

**Semivolatile Organic Compounds by GC/MS**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 16:43	IMR
3/4-Methylphenol	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 16:43	IMR
Naphthalene	ND	1.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 16:43	IMR
Nitrobenzene	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 16:43	IMR
2-Nitrophenol	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 16:43	IMR
4-Nitrophenol	ND	3.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 16:43	IMR
Pentachlorophenol	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 16:43	IMR
Phenanthrene	4.8	1.0	mg/Kg dry	5	MS-09, R-06	SW-846 8270D	3/14/19	3/16/19 16:43	IMR
Phenol	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 16:43	IMR
Pyrene	7.9	1.0	mg/Kg dry	5	MS-09, R-06	SW-846 8270D	3/14/19	3/16/19 16:43	IMR
1,2,4-Trichlorobenzene	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 16:43	IMR
2,4,5-Trichlorophenol	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 16:43	IMR
2,4,6-Trichlorophenol	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 16:43	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	63.0	30-130	
Phenol-d6	61.5	30-130	
Nitrobenzene-d5	63.3	30-130	
2-Fluorobiphenyl	68.5	30-130	
2,4,6-Tribromophenol	68.3	30-130	
p-Terphenyl-d14	81.7	30-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-D6 (5-10)

Sampled: 3/11/2019 08:25

Sample ID: 19C0442-04

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.091	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 20:48	JMB
Aroclor-1221 [1]	ND	0.091	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 20:48	JMB
Aroclor-1232 [1]	ND	0.091	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 20:48	JMB
Aroclor-1242 [1]	ND	0.091	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 20:48	JMB
Aroclor-1248 [1]	ND	0.091	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 20:48	JMB
Aroclor-1254 [1]	ND	0.091	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 20:48	JMB
Aroclor-1260 [1]	ND	0.091	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 20:48	JMB
Aroclor-1262 [1]	ND	0.091	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 20:48	JMB
Aroclor-1268 [1]	ND	0.091	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 20:48	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		86.3	30-150					3/14/19 20:48	
Decachlorobiphenyl [2]		90.1	30-150					3/14/19 20:48	
Tetrachloro-m-xylene [1]		93.2	30-150					3/14/19 20:48	
Tetrachloro-m-xylene [2]		93.7	30-150					3/14/19 20:48	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-D6 (5-10)

Sampled: 3/11/2019 08:25

Sample ID: 19C0442-04

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	1000	200	mg/Kg dry	20		SW-846 8100 Modified	3/14/19	3/17/19 13:17	RMW
<b>Surrogates</b>		<b>% Recovery</b>	<b>Recovery Limits</b>		<b>Flag/Qual</b>				
2-Fluorobiphenyl		*	40-140		S-01			3/17/19 13:17	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-D6 (5-10)

Sampled: 3/11/2019 08:25

Sample ID: 19C0442-04

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	2.0	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 13:24	QNW
Arsenic	3.9	2.0	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 13:24	QNW
Barium	32	2.0	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 13:24	QNW
Beryllium	0.36	0.20	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 13:24	QNW
Cadmium	0.30	0.20	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 13:24	QNW
Chromium	19	0.40	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 13:24	QNW
Lead	32	0.60	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 13:24	QNW
Mercury	0.041	0.031	mg/Kg dry	1		SW-846 7471B	3/13/19	3/14/19 12:15	TBC
Nickel	15	0.40	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 13:24	QNW
Selenium	ND	4.0	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 13:24	QNW
Silver	ND	0.40	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 13:24	QNW
Thallium	ND	2.0	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 13:24	QNW
Vanadium	32	0.81	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 13:24	QNW
Zinc	45	0.81	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 13:24	QNW

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-D6 (5-10)

Sampled: 3/11/2019 08:25

Sample ID: 19C0442-04

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	82.9		% Wt	1		SM 2540G	3/18/19	3/18/19 15:49	VLH
Ignitability	Absent		present/absent	1		SW-846 1030	3/13/19	3/13/19 16:45	DJM
pH @20.1°C	7.7		pH Units	1	H-03	SW-846 9045C	3/13/19	3/13/19 10:50	IS
Reactive Cyanide	ND	4.0	mg/Kg	1		SW-846 9014	3/13/19	3/14/19 11:20	DJM
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	3/13/19	3/14/19 10:45	DJM
Specific conductance	23	2.0	µmhos/cm	1		SM21-22 2510B	3/13/19	3/13/19 12:58	KMV



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-C6 (0-5)

Sampled: 3/11/2019 08:50

Sample ID: 19C0442-05

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.094	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:27	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00094	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:27	MFF
Benzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:27	MFF
Bromobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:27	MFF
Bromochloromethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:27	MFF
Bromodichloromethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:27	MFF
Bromoform	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:27	MFF
Bromomethane	ND	0.0094	mg/Kg dry	1	V-34	SW-846 8260C	3/13/19	3/13/19 13:27	MFF
2-Butanone (MEK)	ND	0.037	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:27	MFF
n-Butylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:27	MFF
sec-Butylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:27	MFF
tert-Butylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:27	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00094	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:27	MFF
Carbon Disulfide	ND	0.0056	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:27	MFF
Carbon Tetrachloride	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:27	MFF
Chlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:27	MFF
Chlorodibromomethane	ND	0.00094	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:27	MFF
Chloroethane	ND	0.0094	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:27	MFF
Chloroform	ND	0.0037	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:27	MFF
Chloromethane	ND	0.0094	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:27	MFF
2-Chlorotoluene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:27	MFF
4-Chlorotoluene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:27	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:27	MFF
1,2-Dibromoethane (EDB)	ND	0.00094	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:27	MFF
Dibromomethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:27	MFF
1,2-Dichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:27	MFF
1,3-Dichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:27	MFF
1,4-Dichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:27	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0094	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:27	MFF
1,1-Dichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:27	MFF
1,2-Dichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:27	MFF
1,1-Dichloroethylene	ND	0.0037	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:27	MFF
cis-1,2-Dichloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:27	MFF
trans-1,2-Dichloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:27	MFF
1,2-Dichloropropane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:27	MFF
1,3-Dichloropropane	ND	0.00094	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:27	MFF
2,2-Dichloropropane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:27	MFF
1,1-Dichloropropene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:27	MFF
cis-1,3-Dichloropropene	ND	0.00094	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:27	MFF
trans-1,3-Dichloropropene	ND	0.00094	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:27	MFF
Diethyl Ether	ND	0.0094	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:27	MFF
Diisopropyl Ether (DIPE)	ND	0.00094	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:27	MFF
1,4-Dioxane	ND	0.094	mg/Kg dry	1	V-16	SW-846 8260C	3/13/19	3/13/19 13:27	MFF
Ethylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:27	MFF

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-C6 (0-5)

Sampled: 3/11/2019 08:50

Sample ID: 19C0442-05

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:27	MFF
2-Hexanone (MBK)	ND	0.019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:27	MFF
Isopropylbenzene (Cumene)	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:27	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:27	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0037	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:27	MFF
Methylene Chloride	ND	0.0094	mg/Kg dry	1	R-05	SW-846 8260C	3/13/19	3/13/19 13:27	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:27	MFF
Naphthalene	ND	0.0037	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:27	MFF
n-Propylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:27	MFF
Styrene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:27	MFF
1,1,1,2-Tetrachloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:27	MFF
1,1,2,2-Tetrachloroethane	ND	0.00094	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:27	MFF
Tetrachloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:27	MFF
Tetrahydrofuran	ND	0.0094	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:27	MFF
Toluene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:27	MFF
1,2,3-Trichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:27	MFF
1,2,4-Trichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:27	MFF
1,1,1-Trichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:27	MFF
1,1,2-Trichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:27	MFF
Trichloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:27	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0094	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:27	MFF
1,2,3-Trichloropropane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:27	MFF
1,2,4-Trimethylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:27	MFF
1,3,5-Trimethylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:27	MFF
Vinyl Chloride	ND	0.0094	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:27	MFF
m+p Xylene	ND	0.0037	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:27	MFF
o-Xylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:27	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	99.2	70-130	
Toluene-d8	94.1	70-130	
4-Bromofluorobenzene	96.3	70-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-C6 (0-5)

Sampled: 3/11/2019 08:50

Sample ID: 19C0442-05

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.96	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:42	IMR
Acenaphthylene	ND	0.96	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:42	IMR
Acetophenone	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:42	IMR
Aniline	ND	1.9	mg/Kg dry	5	V-34	SW-846 8270D	3/14/19	3/16/19 18:42	IMR
Anthracene	ND	0.96	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:42	IMR
Benzo(a)anthracene	2.1	0.96	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:42	IMR
Benzo(a)pyrene	2.1	0.96	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:42	IMR
Benzo(b)fluoranthene	2.5	0.96	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:42	IMR
Benzo(g,h,i)perylene	1.0	0.96	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:42	IMR
Benzo(k)fluoranthene	0.97	0.96	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:42	IMR
Bis(2-chloroethoxy)methane	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:42	IMR
Bis(2-chloroethyl)ether	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:42	IMR
Bis(2-chloroisopropyl)ether	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:42	IMR
Bis(2-Ethylhexyl)phthalate	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:42	IMR
4-Bromophenylphenylether	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:42	IMR
Butylbenzylphthalate	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:42	IMR
4-Chloroaniline	ND	3.7	mg/Kg dry	5	V-34	SW-846 8270D	3/14/19	3/16/19 18:42	IMR
2-Chloronaphthalene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:42	IMR
2-Chlorophenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:42	IMR
Chrysene	2.2	0.96	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:42	IMR
Dibenz(a,h)anthracene	ND	0.96	mg/Kg dry	5	V-20	SW-846 8270D	3/14/19	3/16/19 18:42	IMR
Dibenzofuran	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:42	IMR
Di-n-butylphthalate	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:42	IMR
1,2-Dichlorobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:42	IMR
1,3-Dichlorobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:42	IMR
1,4-Dichlorobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:42	IMR
3,3-Dichlorobenzidine	ND	0.96	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:42	IMR
2,4-Dichlorophenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:42	IMR
Diethylphthalate	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:42	IMR
2,4-Dimethylphenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:42	IMR
Dimethylphthalate	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:42	IMR
2,4-Dinitrophenol	ND	3.7	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:42	IMR
2,4-Dinitrotoluene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:42	IMR
2,6-Dinitrotoluene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:42	IMR
Di-n-octylphthalate	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:42	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:42	IMR
Fluoranthene	3.8	0.96	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:42	IMR
Fluorene	ND	0.96	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:42	IMR
Hexachlorobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:42	IMR
Hexachlorobutadiene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:42	IMR
Hexachloroethane	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:42	IMR
Indeno(1,2,3-cd)pyrene	1.1	0.96	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:42	IMR
Isophorone	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:42	IMR
2-Methylnaphthalene	ND	0.96	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:42	IMR

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-C6 (0-5)

Sampled: 3/11/2019 08:50

Sample ID: 19C0442-05

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:42	IMR
3/4-Methylphenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:42	IMR
Naphthalene	ND	0.96	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:42	IMR
Nitrobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:42	IMR
2-Nitrophenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:42	IMR
4-Nitrophenol	ND	3.7	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:42	IMR
Pentachlorophenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:42	IMR
Phenanthrene	3.0	0.96	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:42	IMR
Phenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:42	IMR
Pyrene	4.5	0.96	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:42	IMR
1,2,4-Trichlorobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:42	IMR
2,4,5-Trichlorophenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:42	IMR
2,4,6-Trichlorophenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 18:42	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	91.3	30-130	
Phenol-d6	90.4	30-130	
Nitrobenzene-d5	88.9	30-130	
2-Fluorobiphenyl	96.4	30-130	
2,4,6-Tribromophenol	97.2	30-130	
p-Terphenyl-d14	108	30-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-C6 (0-5)

Sampled: 3/11/2019 08:50

Sample ID: 19C0442-05

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 21:06	JMB
Aroclor-1221 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 21:06	JMB
Aroclor-1232 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 21:06	JMB
Aroclor-1242 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 21:06	JMB
Aroclor-1248 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 21:06	JMB
Aroclor-1254 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 21:06	JMB
Aroclor-1260 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 21:06	JMB
Aroclor-1262 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 21:06	JMB
Aroclor-1268 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 21:06	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		87.5	30-150					3/14/19 21:06	
Decachlorobiphenyl [2]		90.6	30-150					3/14/19 21:06	
Tetrachloro-m-xylene [1]		93.1	30-150					3/14/19 21:06	
Tetrachloro-m-xylene [2]		92.0	30-150					3/14/19 21:06	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-C6 (0-5)

Sampled: 3/11/2019 08:50

Sample ID: 19C0442-05

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	520	190	mg/Kg dry	20		SW-846 8100 Modified	3/14/19	3/17/19 15:40	RMW
<b>Surrogates</b>		<b>% Recovery</b>	<b>Recovery Limits</b>		<b>Flag/Qual</b>				
2-Fluorobiphenyl		*	40-140		S-01			3/17/19 15:40	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-C6 (0-5)

Sampled: 3/11/2019 08:50

Sample ID: 19C0442-05

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 13:29	QNW
Arsenic	5.9	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 13:29	QNW
Barium	46	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 13:29	QNW
Beryllium	0.32	0.19	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 13:29	QNW
Cadmium	0.40	0.19	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 13:29	QNW
Chromium	23	0.38	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 13:29	QNW
Lead	79	0.57	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 13:29	QNW
Mercury	0.064	0.027	mg/Kg dry	1		SW-846 7471B	3/13/19	3/14/19 12:17	TBC
Nickel	10	0.38	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 13:29	QNW
Selenium	ND	3.8	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 13:29	QNW
Silver	ND	0.38	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 13:29	QNW
Thallium	ND	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 13:29	QNW
Vanadium	20	0.76	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 13:29	QNW
Zinc	51	0.76	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 13:29	QNW

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-C6 (0-5)

Sampled: 3/11/2019 08:50

Sample ID: 19C0442-05

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	87.4		% Wt	1		SM 2540G	3/18/19	3/18/19 15:49	VLH
Ignitability	Absent		present/absent	1		SW-846 1030	3/13/19	3/13/19 16:45	DJM
pH @19.8°C	7.3		pH Units	1	H-03	SW-846 9045C	3/13/19	3/13/19 10:50	IS
Reactive Cyanide	ND	4.0	mg/Kg	1		SW-846 9014	3/13/19	3/14/19 11:20	DJM
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	3/13/19	3/14/19 10:45	DJM
Specific conductance	21	2.0	µmhos/cm	1		SM21-22 2510B	3/13/19	3/13/19 12:58	KMV



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-C6 (5-10)

Sampled: 3/11/2019 08:55

Sample ID: 19C0442-06

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.089	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:51	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00089	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:51	MFF
Benzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:51	MFF
Bromobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:51	MFF
Bromochloromethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:51	MFF
Bromodichloromethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:51	MFF
Bromoform	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:51	MFF
Bromomethane	ND	0.0089	mg/Kg dry	1	V-34	SW-846 8260C	3/13/19	3/13/19 13:51	MFF
2-Butanone (MEK)	ND	0.036	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:51	MFF
n-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:51	MFF
sec-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:51	MFF
tert-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:51	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00089	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:51	MFF
Carbon Disulfide	ND	0.0054	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:51	MFF
Carbon Tetrachloride	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:51	MFF
Chlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:51	MFF
Chlorodibromomethane	ND	0.00089	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:51	MFF
Chloroethane	ND	0.0089	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:51	MFF
Chloroform	ND	0.0036	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:51	MFF
Chloromethane	ND	0.0089	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:51	MFF
2-Chlorotoluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:51	MFF
4-Chlorotoluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:51	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:51	MFF
1,2-Dibromoethane (EDB)	ND	0.00089	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:51	MFF
Dibromomethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:51	MFF
1,2-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:51	MFF
1,3-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:51	MFF
1,4-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:51	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0089	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:51	MFF
1,1-Dichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:51	MFF
1,2-Dichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:51	MFF
1,1-Dichloroethylene	ND	0.0036	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:51	MFF
cis-1,2-Dichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:51	MFF
trans-1,2-Dichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:51	MFF
1,2-Dichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:51	MFF
1,3-Dichloropropane	ND	0.00089	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:51	MFF
2,2-Dichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:51	MFF
1,1-Dichloropropene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:51	MFF
cis-1,3-Dichloropropene	ND	0.00089	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:51	MFF
trans-1,3-Dichloropropene	ND	0.00089	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:51	MFF
Diethyl Ether	ND	0.0089	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:51	MFF
Diisopropyl Ether (DIPE)	ND	0.00089	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:51	MFF
1,4-Dioxane	ND	0.089	mg/Kg dry	1	V-16	SW-846 8260C	3/13/19	3/13/19 13:51	MFF
Ethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:51	MFF

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-C6 (5-10)

Sampled: 3/11/2019 08:55

Sample ID: 19C0442-06

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:51	MFF
2-Hexanone (MBK)	ND	0.018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:51	MFF
Isopropylbenzene (Cumene)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:51	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:51	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0036	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:51	MFF
Methylene Chloride	ND	0.0089	mg/Kg dry	1	R-05	SW-846 8260C	3/13/19	3/13/19 13:51	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:51	MFF
Naphthalene	ND	0.0036	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:51	MFF
n-Propylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:51	MFF
Styrene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:51	MFF
1,1,1,2-Tetrachloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:51	MFF
1,1,2,2-Tetrachloroethane	ND	0.00089	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:51	MFF
Tetrachloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:51	MFF
Tetrahydrofuran	ND	0.0089	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:51	MFF
Toluene	0.0027	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:51	MFF
1,2,3-Trichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:51	MFF
1,2,4-Trichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:51	MFF
1,1,1-Trichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:51	MFF
1,1,2-Trichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:51	MFF
Trichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:51	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0089	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:51	MFF
1,2,3-Trichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:51	MFF
1,2,4-Trimethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:51	MFF
1,3,5-Trimethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:51	MFF
Vinyl Chloride	ND	0.0089	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:51	MFF
m+p Xylene	ND	0.0036	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:51	MFF
o-Xylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:51	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	101	70-130	
Toluene-d8	94.2	70-130	
4-Bromofluorobenzene	94.4	70-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-C6 (5-10)

Sampled: 3/11/2019 08:55

Sample ID: 19C0442-06

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	4.1	0.97	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:10	IMR
Acenaphthylene	ND	0.97	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:10	IMR
Acetophenone	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:10	IMR
Aniline	ND	1.9	mg/Kg dry	5	V-34	SW-846 8270D	3/14/19	3/16/19 19:10	IMR
Anthracene	9.0	0.97	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:10	IMR
Benzo(a)anthracene	13	0.97	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:10	IMR
Benzo(a)pyrene	12	0.97	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:10	IMR
Benzo(b)fluoranthene	13	0.97	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:10	IMR
Benzo(g,h,i)perylene	5.6	0.97	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:10	IMR
Benzo(k)fluoranthene	4.8	0.97	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:10	IMR
Bis(2-chloroethoxy)methane	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:10	IMR
Bis(2-chloroethyl)ether	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:10	IMR
Bis(2-chloroisopropyl)ether	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:10	IMR
Bis(2-Ethylhexyl)phthalate	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:10	IMR
4-Bromophenylphenylether	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:10	IMR
Butylbenzylphthalate	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:10	IMR
4-Chloroaniline	ND	3.8	mg/Kg dry	5	V-34	SW-846 8270D	3/14/19	3/16/19 19:10	IMR
2-Chloronaphthalene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:10	IMR
2-Chlorophenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:10	IMR
Chrysene	12	0.97	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:10	IMR
Dibenz(a,h)anthracene	1.5	0.97	mg/Kg dry	5	V-06	SW-846 8270D	3/14/19	3/16/19 19:10	IMR
Dibenzofuran	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:10	IMR
Di-n-butylphthalate	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:10	IMR
1,2-Dichlorobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:10	IMR
1,3-Dichlorobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:10	IMR
1,4-Dichlorobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:10	IMR
3,3-Dichlorobenzidine	ND	0.97	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:10	IMR
2,4-Dichlorophenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:10	IMR
Diethylphthalate	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:10	IMR
2,4-Dimethylphenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:10	IMR
Dimethylphthalate	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:10	IMR
2,4-Dinitrophenol	ND	3.8	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:10	IMR
2,4-Dinitrotoluene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:10	IMR
2,6-Dinitrotoluene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:10	IMR
Di-n-octylphthalate	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:10	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:10	IMR
Fluoranthene	23	1.9	mg/Kg dry	10		SW-846 8270D	3/14/19	3/18/19 13:13	IMR
Fluorene	4.2	0.97	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:10	IMR
Hexachlorobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:10	IMR
Hexachlorobutadiene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:10	IMR
Hexachloroethane	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:10	IMR
Indeno(1,2,3-cd)pyrene	6.4	0.97	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:10	IMR
Isophorone	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:10	IMR
2-Methylnaphthalene	ND	0.97	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:10	IMR

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-C6 (5-10)

Sampled: 3/11/2019 08:55

Sample ID: 19C0442-06

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:10	IMR
3/4-Methylphenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:10	IMR
Naphthalene	ND	0.97	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:10	IMR
Nitrobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:10	IMR
2-Nitrophenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:10	IMR
4-Nitrophenol	ND	3.8	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:10	IMR
Pentachlorophenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:10	IMR
Phenanthrene	19	1.9	mg/Kg dry	10		SW-846 8270D	3/14/19	3/18/19 13:13	IMR
Phenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:10	IMR
Pyrene	19	1.9	mg/Kg dry	10		SW-846 8270D	3/14/19	3/18/19 13:13	IMR
1,2,4-Trichlorobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:10	IMR
2,4,5-Trichlorophenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:10	IMR
2,4,6-Trichlorophenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:10	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	59.0	30-130	3/18/19 13:13
2-Fluorophenol	81.8	30-130	3/16/19 19:10
Phenol-d6	57.2	30-130	3/18/19 13:13
Phenol-d6	77.9	30-130	3/16/19 19:10
Nitrobenzene-d5	61.6	30-130	3/18/19 13:13
Nitrobenzene-d5	82.2	30-130	3/16/19 19:10
2-Fluorobiphenyl	60.8	30-130	3/18/19 13:13
2-Fluorobiphenyl	85.7	30-130	3/16/19 19:10
2,4,6-Tribromophenol	62.4	30-130	3/18/19 13:13
2,4,6-Tribromophenol	85.8	30-130	3/16/19 19:10
p-Terphenyl-d14	64.3	30-130	3/18/19 13:13
p-Terphenyl-d14	93.0	30-130	3/16/19 19:10

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-C6 (5-10)

Sampled: 3/11/2019 08:55

Sample ID: 19C0442-06

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.088	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 21:23	JMB
Aroclor-1221 [1]	ND	0.088	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 21:23	JMB
Aroclor-1232 [1]	ND	0.088	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 21:23	JMB
Aroclor-1242 [1]	ND	0.088	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 21:23	JMB
Aroclor-1248 [1]	ND	0.088	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 21:23	JMB
Aroclor-1254 [1]	ND	0.088	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 21:23	JMB
Aroclor-1260 [1]	ND	0.088	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 21:23	JMB
Aroclor-1262 [1]	ND	0.088	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 21:23	JMB
Aroclor-1268 [1]	ND	0.088	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 21:23	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		89.6	30-150					3/14/19 21:23	
Decachlorobiphenyl [2]		90.8	30-150					3/14/19 21:23	
Tetrachloro-m-xylene [1]		97.0	30-150					3/14/19 21:23	
Tetrachloro-m-xylene [2]		96.2	30-150					3/14/19 21:23	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-C6 (5-10)

Sampled: 3/11/2019 08:55

Sample ID: 19C0442-06

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	1100	190	mg/Kg dry	20		SW-846 8100 Modified	3/14/19	3/17/19 16:00	RMW
<b>Surrogates</b>		<b>% Recovery</b>	<b>Recovery Limits</b>		<b>Flag/Qual</b>				
2-Fluorobiphenyl		*	40-140		S-01			3/17/19 16:00	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Sampled: 3/11/2019 08:55

Field Sample #: TP-C6 (5-10)

Sample ID: 19C0442-06

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 13:53	QNW
Arsenic	5.3	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 13:53	QNW
Barium	33	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 13:53	QNW
Beryllium	0.27	0.19	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 13:53	QNW
Cadmium	0.36	0.19	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 13:53	QNW
Chromium	15	0.38	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 13:53	QNW
Lead	30	0.57	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 13:53	QNW
Mercury	ND	0.029	mg/Kg dry	1		SW-846 7471B	3/13/19	3/14/19 12:18	TBC
Nickel	12	0.38	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 13:53	QNW
Selenium	ND	3.8	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 13:53	QNW
Silver	ND	0.38	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 13:53	QNW
Thallium	ND	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 13:53	QNW
Vanadium	21	0.76	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 13:53	QNW
Zinc	39	0.76	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 13:53	QNW

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-C6 (5-10)

Sampled: 3/11/2019 08:55

Sample ID: 19C0442-06

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	86.4		% Wt	1		SM 2540G	3/18/19	3/18/19 15:49	VLH
Ignitability	Absent		present/absent	1		SW-846 1030	3/13/19	3/13/19 16:45	DJM
pH @20.1°C	7.6		pH Units	1	H-03	SW-846 9045C	3/13/19	3/13/19 10:50	IS
Reactive Cyanide	ND	4.0	mg/Kg	1		SW-846 9014	3/13/19	3/14/19 11:20	DJM
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	3/13/19	3/14/19 10:45	DJM
Specific conductance	17	2.0	µmhos/cm	1		SM21-22 2510B	3/13/19	3/13/19 12:58	KMV



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-B6 (0-5)

Sampled: 3/11/2019 09:15

Sample ID: 19C0442-07

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.092	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:16	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00092	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:16	MFF
Benzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:16	MFF
Bromobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:16	MFF
Bromochloromethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:16	MFF
Bromodichloromethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:16	MFF
Bromoform	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:16	MFF
Bromomethane	ND	0.0092	mg/Kg dry	1	V-34	SW-846 8260C	3/13/19	3/13/19 14:16	MFF
2-Butanone (MEK)	ND	0.037	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:16	MFF
n-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:16	MFF
sec-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:16	MFF
tert-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:16	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00092	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:16	MFF
Carbon Disulfide	ND	0.0055	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:16	MFF
Carbon Tetrachloride	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:16	MFF
Chlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:16	MFF
Chlorodibromomethane	ND	0.00092	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:16	MFF
Chloroethane	ND	0.0092	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:16	MFF
Chloroform	ND	0.0037	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:16	MFF
Chloromethane	ND	0.0092	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:16	MFF
2-Chlorotoluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:16	MFF
4-Chlorotoluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:16	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:16	MFF
1,2-Dibromoethane (EDB)	ND	0.00092	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:16	MFF
Dibromomethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:16	MFF
1,2-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:16	MFF
1,3-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:16	MFF
1,4-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:16	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0092	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:16	MFF
1,1-Dichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:16	MFF
1,2-Dichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:16	MFF
1,1-Dichloroethylene	ND	0.0037	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:16	MFF
cis-1,2-Dichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:16	MFF
trans-1,2-Dichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:16	MFF
1,2-Dichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:16	MFF
1,3-Dichloropropane	ND	0.00092	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:16	MFF
2,2-Dichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:16	MFF
1,1-Dichloropropene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:16	MFF
cis-1,3-Dichloropropene	ND	0.00092	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:16	MFF
trans-1,3-Dichloropropene	ND	0.00092	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:16	MFF
Diethyl Ether	ND	0.0092	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:16	MFF
Diisopropyl Ether (DIPE)	ND	0.00092	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:16	MFF
1,4-Dioxane	ND	0.092	mg/Kg dry	1	V-16	SW-846 8260C	3/13/19	3/13/19 14:16	MFF
Ethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:16	MFF

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-B6 (0-5)

Sampled: 3/11/2019 09:15

Sample ID: 19C0442-07

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:16	MFF
2-Hexanone (MBK)	ND	0.018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:16	MFF
Isopropylbenzene (Cumene)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:16	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:16	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0037	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:16	MFF
Methylene Chloride	ND	0.0092	mg/Kg dry	1	R-05	SW-846 8260C	3/13/19	3/13/19 14:16	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:16	MFF
Naphthalene	ND	0.0037	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:16	MFF
n-Propylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:16	MFF
Styrene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:16	MFF
1,1,1,2-Tetrachloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:16	MFF
1,1,2,2-Tetrachloroethane	ND	0.00092	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:16	MFF
Tetrachloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:16	MFF
Tetrahydrofuran	ND	0.0092	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:16	MFF
Toluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:16	MFF
1,2,3-Trichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:16	MFF
1,2,4-Trichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:16	MFF
1,1,1-Trichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:16	MFF
1,1,2-Trichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:16	MFF
Trichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:16	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0092	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:16	MFF
1,2,3-Trichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:16	MFF
1,2,4-Trimethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:16	MFF
1,3,5-Trimethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:16	MFF
Vinyl Chloride	ND	0.0092	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:16	MFF
m+p Xylene	ND	0.0037	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:16	MFF
o-Xylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:16	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	100	70-130	
Toluene-d8	94.4	70-130	
4-Bromofluorobenzene	95.8	70-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-B6 (0-5)

Sampled: 3/11/2019 09:15

Sample ID: 19C0442-07

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatle Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.98	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:39	IMR
Acenaphthylene	ND	0.98	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:39	IMR
Acetophenone	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:39	IMR
Aniline	ND	2.0	mg/Kg dry	5	V-34	SW-846 8270D	3/14/19	3/16/19 19:39	IMR
Anthracene	ND	0.98	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:39	IMR
Benzo(a)anthracene	ND	0.98	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:39	IMR
Benzo(a)pyrene	ND	0.98	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:39	IMR
Benzo(b)fluoranthene	1.0	0.98	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:39	IMR
Benzo(g,h,i)perylene	ND	0.98	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:39	IMR
Benzo(k)fluoranthene	ND	0.98	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:39	IMR
Bis(2-chloroethoxy)methane	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:39	IMR
Bis(2-chloroethyl)ether	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:39	IMR
Bis(2-chloroisopropyl)ether	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:39	IMR
Bis(2-Ethylhexyl)phthalate	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:39	IMR
4-Bromophenylphenylether	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:39	IMR
Butylbenzylphthalate	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:39	IMR
4-Chloroaniline	ND	3.8	mg/Kg dry	5	V-34	SW-846 8270D	3/14/19	3/16/19 19:39	IMR
2-Chloronaphthalene	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:39	IMR
2-Chlorophenol	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:39	IMR
Chrysene	ND	0.98	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:39	IMR
Dibenz(a,h)anthracene	ND	0.98	mg/Kg dry	5	V-20	SW-846 8270D	3/14/19	3/16/19 19:39	IMR
Dibenzofuran	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:39	IMR
Di-n-butylphthalate	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:39	IMR
1,2-Dichlorobenzene	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:39	IMR
1,3-Dichlorobenzene	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:39	IMR
1,4-Dichlorobenzene	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:39	IMR
3,3-Dichlorobenzidine	ND	0.98	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:39	IMR
2,4-Dichlorophenol	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:39	IMR
Diethylphthalate	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:39	IMR
2,4-Dimethylphenol	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:39	IMR
Dimethylphthalate	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:39	IMR
2,4-Dinitrophenol	ND	3.8	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:39	IMR
2,4-Dinitrotoluene	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:39	IMR
2,6-Dinitrotoluene	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:39	IMR
Di-n-octylphthalate	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:39	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:39	IMR
Fluoranthene	1.5	0.98	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:39	IMR
Fluorene	ND	0.98	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:39	IMR
Hexachlorobenzene	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:39	IMR
Hexachlorobutadiene	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:39	IMR
Hexachloroethane	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:39	IMR
Indeno(1,2,3-cd)pyrene	ND	0.98	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:39	IMR
Isophorone	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:39	IMR
2-Methylnaphthalene	ND	0.98	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:39	IMR

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-B6 (0-5)

Sampled: 3/11/2019 09:15

Sample ID: 19C0442-07

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:39	IMR
3/4-Methylphenol	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:39	IMR
Naphthalene	ND	0.98	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:39	IMR
Nitrobenzene	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:39	IMR
2-Nitrophenol	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:39	IMR
4-Nitrophenol	ND	3.8	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:39	IMR
Pentachlorophenol	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:39	IMR
Phenanthrene	1.1	0.98	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:39	IMR
Phenol	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:39	IMR
Pyrene	ND	0.98	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:39	IMR
1,2,4-Trichlorobenzene	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:39	IMR
2,4,5-Trichlorophenol	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:39	IMR
2,4,6-Trichlorophenol	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 19:39	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	38.4	30-130	
Phenol-d6	39.3	30-130	
Nitrobenzene-d5	38.4	30-130	
2-Fluorobiphenyl	38.6	30-130	
2,4,6-Tribromophenol	39.7	30-130	
p-Terphenyl-d14	44.8	30-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-B6 (0-5)

Sampled: 3/11/2019 09:15

Sample ID: 19C0442-07

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 21:41	JMB
Aroclor-1221 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 21:41	JMB
Aroclor-1232 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 21:41	JMB
Aroclor-1242 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 21:41	JMB
Aroclor-1248 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 21:41	JMB
Aroclor-1254 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 21:41	JMB
Aroclor-1260 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 21:41	JMB
Aroclor-1262 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 21:41	JMB
Aroclor-1268 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 21:41	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		84.6	30-150					3/14/19 21:41	
Decachlorobiphenyl [2]		86.7	30-150					3/14/19 21:41	
Tetrachloro-m-xylene [1]		92.4	30-150					3/14/19 21:41	
Tetrachloro-m-xylene [2]		90.6	30-150					3/14/19 21:41	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-B6 (0-5)

Sampled: 3/11/2019 09:15

Sample ID: 19C0442-07

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	1100	190	mg/Kg dry	20		SW-846 8100 Modified	3/14/19	3/17/19 16:20	RMW
<b>Surrogates</b>		<b>% Recovery</b>	<b>Recovery Limits</b>		<b>Flag/Qual</b>				
2-Fluorobiphenyl		*	40-140		S-01			3/17/19 16:20	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-B6 (0-5)

Sampled: 3/11/2019 09:15

Sample ID: 19C0442-07

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 13:58	QNW
Arsenic	4.7	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 13:58	QNW
Barium	36	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 13:58	QNW
Beryllium	0.27	0.19	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 13:58	QNW
Cadmium	0.39	0.19	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 13:58	QNW
Chromium	14	0.38	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 13:58	QNW
Lead	46	0.57	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 13:58	QNW
Mercury	0.059	0.030	mg/Kg dry	1		SW-846 7471B	3/13/19	3/14/19 12:20	TBC
Nickel	11	0.38	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 13:58	QNW
Selenium	ND	3.8	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 13:58	QNW
Silver	ND	0.38	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 13:58	QNW
Thallium	ND	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 13:58	QNW
Vanadium	24	0.76	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 13:58	QNW
Zinc	48	0.76	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 13:58	QNW

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-B6 (0-5)

Sampled: 3/11/2019 09:15

Sample ID: 19C0442-07

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	86.8		% Wt	1		SM 2540G	3/18/19	3/18/19 15:49	VLH
Ignitability	Absent		present/absent	1		SW-846 1030	3/13/19	3/13/19 16:45	DJM
pH @20.5°C	8.1		pH Units	1	H-03	SW-846 9045C	3/13/19	3/13/19 10:50	IS
Reactive Cyanide	ND	4.0	mg/Kg	1		SW-846 9014	3/13/19	3/14/19 11:20	DJM
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	3/13/19	3/14/19 10:45	DJM
Specific conductance	20	2.0	µmhos/cm	1		SM21-22 2510B	3/13/19	3/13/19 12:58	KMV



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-B6 (5-10)

Sampled: 3/11/2019 09:20

Sample ID: 19C0442-08

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.10	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:41	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.0010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:41	MFF
Benzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:41	MFF
Bromobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:41	MFF
Bromochloromethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:41	MFF
Bromodichloromethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:41	MFF
Bromoform	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:41	MFF
Bromomethane	ND	0.010	mg/Kg dry	1	V-34	SW-846 8260C	3/13/19	3/13/19 14:41	MFF
2-Butanone (MEK)	ND	0.040	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:41	MFF
n-Butylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:41	MFF
sec-Butylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:41	MFF
tert-Butylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:41	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.0010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:41	MFF
Carbon Disulfide	ND	0.0060	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:41	MFF
Carbon Tetrachloride	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:41	MFF
Chlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:41	MFF
Chlorodibromomethane	ND	0.0010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:41	MFF
Chloroethane	ND	0.010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:41	MFF
Chloroform	ND	0.0040	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:41	MFF
Chloromethane	ND	0.010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:41	MFF
2-Chlorotoluene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:41	MFF
4-Chlorotoluene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:41	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:41	MFF
1,2-Dibromoethane (EDB)	ND	0.0010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:41	MFF
Dibromomethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:41	MFF
1,2-Dichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:41	MFF
1,3-Dichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:41	MFF
1,4-Dichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:41	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:41	MFF
1,1-Dichloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:41	MFF
1,2-Dichloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:41	MFF
1,1-Dichloroethylene	ND	0.0040	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:41	MFF
cis-1,2-Dichloroethylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:41	MFF
trans-1,2-Dichloroethylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:41	MFF
1,2-Dichloropropane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:41	MFF
1,3-Dichloropropane	ND	0.0010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:41	MFF
2,2-Dichloropropane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:41	MFF
1,1-Dichloropropene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:41	MFF
cis-1,3-Dichloropropene	ND	0.0010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:41	MFF
trans-1,3-Dichloropropene	ND	0.0010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:41	MFF
Diethyl Ether	ND	0.010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:41	MFF
Diisopropyl Ether (DIPE)	ND	0.0010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:41	MFF
1,4-Dioxane	ND	0.10	mg/Kg dry	1	V-16	SW-846 8260C	3/13/19	3/13/19 14:41	MFF
Ethylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:41	MFF

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-B6 (5-10)

Sampled: 3/11/2019 09:20

Sample ID: 19C0442-08

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:41	MFF
2-Hexanone (MBK)	ND	0.020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:41	MFF
Isopropylbenzene (Cumene)	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:41	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:41	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0040	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:41	MFF
Methylene Chloride	ND	0.010	mg/Kg dry	1	R-05	SW-846 8260C	3/13/19	3/13/19 14:41	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:41	MFF
Naphthalene	ND	0.0040	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:41	MFF
n-Propylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:41	MFF
Styrene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:41	MFF
1,1,1,2-Tetrachloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:41	MFF
1,1,2,2-Tetrachloroethane	ND	0.0010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:41	MFF
Tetrachloroethylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:41	MFF
Tetrahydrofuran	ND	0.010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:41	MFF
Toluene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:41	MFF
1,2,3-Trichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:41	MFF
1,2,4-Trichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:41	MFF
1,1,1-Trichloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:41	MFF
1,1,2-Trichloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:41	MFF
Trichloroethylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:41	MFF
Trichlorofluoromethane (Freon 11)	ND	0.010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:41	MFF
1,2,3-Trichloropropane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:41	MFF
1,2,4-Trimethylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:41	MFF
1,3,5-Trimethylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:41	MFF
Vinyl Chloride	ND	0.010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:41	MFF
m+p Xylene	ND	0.0040	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:41	MFF
o-Xylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:41	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	98.2	70-130	
Toluene-d8	93.9	70-130	
4-Bromofluorobenzene	96.0	70-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-B6 (5-10)

Sampled: 3/11/2019 09:20

Sample ID: 19C0442-08

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.93	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 20:10	IMR
Acenaphthylene	ND	0.93	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 20:10	IMR
Acetophenone	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 20:10	IMR
Aniline	ND	1.9	mg/Kg dry	5	V-34	SW-846 8270D	3/14/19	3/16/19 20:10	IMR
Anthracene	ND	0.93	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 20:10	IMR
Benzo(a)anthracene	1.5	0.93	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 20:10	IMR
Benzo(a)pyrene	1.7	0.93	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 20:10	IMR
Benzo(b)fluoranthene	2.2	0.93	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 20:10	IMR
Benzo(g,h,i)perylene	0.94	0.93	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 20:10	IMR
Benzo(k)fluoranthene	ND	0.93	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 20:10	IMR
Bis(2-chloroethoxy)methane	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 20:10	IMR
Bis(2-chloroethyl)ether	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 20:10	IMR
Bis(2-chloroisopropyl)ether	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 20:10	IMR
Bis(2-Ethylhexyl)phthalate	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 20:10	IMR
4-Bromophenylphenylether	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 20:10	IMR
Butylbenzylphthalate	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 20:10	IMR
4-Chloroaniline	ND	3.6	mg/Kg dry	5	V-34	SW-846 8270D	3/14/19	3/16/19 20:10	IMR
2-Chloronaphthalene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 20:10	IMR
2-Chlorophenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 20:10	IMR
Chrysene	1.4	0.93	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 20:10	IMR
Dibenz(a,h)anthracene	ND	0.93	mg/Kg dry	5	V-20	SW-846 8270D	3/14/19	3/16/19 20:10	IMR
Dibenzofuran	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 20:10	IMR
Di-n-butylphthalate	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 20:10	IMR
1,2-Dichlorobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 20:10	IMR
1,3-Dichlorobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 20:10	IMR
1,4-Dichlorobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 20:10	IMR
3,3-Dichlorobenzidine	ND	0.93	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 20:10	IMR
2,4-Dichlorophenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 20:10	IMR
Diethylphthalate	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 20:10	IMR
2,4-Dimethylphenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 20:10	IMR
Dimethylphthalate	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 20:10	IMR
2,4-Dinitrophenol	ND	3.6	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 20:10	IMR
2,4-Dinitrotoluene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 20:10	IMR
2,6-Dinitrotoluene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 20:10	IMR
Di-n-octylphthalate	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 20:10	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 20:10	IMR
Fluoranthene	2.6	0.93	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 20:10	IMR
Fluorene	ND	0.93	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 20:10	IMR
Hexachlorobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 20:10	IMR
Hexachlorobutadiene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 20:10	IMR
Hexachloroethane	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 20:10	IMR
Indeno(1,2,3-cd)pyrene	1.0	0.93	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 20:10	IMR
Isophorone	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 20:10	IMR
2-Methylnaphthalene	ND	0.93	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 20:10	IMR

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-B6 (5-10)

Sampled: 3/11/2019 09:20

Sample ID: 19C0442-08

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 20:10	IMR
3/4-Methylphenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 20:10	IMR
Naphthalene	ND	0.93	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 20:10	IMR
Nitrobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 20:10	IMR
2-Nitrophenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 20:10	IMR
4-Nitrophenol	ND	3.6	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 20:10	IMR
Pentachlorophenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 20:10	IMR
Phenanthrene	1.1	0.93	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 20:10	IMR
Phenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 20:10	IMR
Pyrene	3.0	0.93	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 20:10	IMR
1,2,4-Trichlorobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 20:10	IMR
2,4,5-Trichlorophenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 20:10	IMR
2,4,6-Trichlorophenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 20:10	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	105	30-130	
Phenol-d6	107	30-130	
Nitrobenzene-d5	107	30-130	
2-Fluorobiphenyl	111	30-130	
2,4,6-Tribromophenol	113	30-130	
p-Terphenyl-d14	119	30-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-B6 (5-10)

Sampled: 3/11/2019 09:20

Sample ID: 19C0442-08

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.087	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 21:59	JMB
Aroclor-1221 [1]	ND	0.087	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 21:59	JMB
Aroclor-1232 [1]	ND	0.087	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 21:59	JMB
Aroclor-1242 [1]	ND	0.087	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 21:59	JMB
Aroclor-1248 [1]	ND	0.087	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 21:59	JMB
Aroclor-1254 [1]	ND	0.087	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 21:59	JMB
Aroclor-1260 [1]	ND	0.087	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 21:59	JMB
Aroclor-1262 [1]	ND	0.087	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 21:59	JMB
Aroclor-1268 [1]	ND	0.087	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 21:59	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		86.5	30-150					3/14/19 21:59	
Decachlorobiphenyl [2]		92.0	30-150					3/14/19 21:59	
Tetrachloro-m-xylene [1]		98.3	30-150					3/14/19 21:59	
Tetrachloro-m-xylene [2]		98.5	30-150					3/14/19 21:59	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-B6 (5-10)

Sampled: 3/11/2019 09:20

Sample ID: 19C0442-08

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	660	180	mg/Kg dry	20		SW-846 8100 Modified	3/14/19	3/17/19 16:40	RMW
<b>Surrogates</b>		<b>% Recovery</b>	<b>Recovery Limits</b>		<b>Flag/Qual</b>				
2-Fluorobiphenyl		*	40-140		S-01			3/17/19 16:40	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-B6 (5-10)

Sampled: 3/11/2019 09:20

Sample ID: 19C0442-08

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:03	QNW
Arsenic	4.1	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:03	QNW
Barium	33	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:03	QNW
Beryllium	0.29	0.19	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:03	QNW
Cadmium	0.32	0.19	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:03	QNW
Chromium	14	0.37	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:03	QNW
Lead	26	0.56	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:03	QNW
Mercury	ND	0.027	mg/Kg dry	1		SW-846 7471B	3/13/19	3/14/19 12:22	TBC
Nickel	11	0.37	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:03	QNW
Selenium	ND	3.7	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:03	QNW
Silver	ND	0.37	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:03	QNW
Thallium	ND	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:03	QNW
Vanadium	22	0.74	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:03	QNW
Zinc	38	0.74	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:03	QNW

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-B6 (5-10)

Sampled: 3/11/2019 09:20

Sample ID: 19C0442-08

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	89.7		% Wt	1		SM 2540G	3/18/19	3/18/19 15:50	VLH
Ignitability	Absent		present/absent	1		SW-846 1030	3/13/19	3/13/19 16:45	DJM
pH @19.9°C	7.9		pH Units	1	H-03	SW-846 9045C	3/13/19	3/13/19 10:50	IS
Reactive Cyanide	ND	4.0	mg/Kg	1		SW-846 9014	3/13/19	3/14/19 11:20	DJM
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	3/13/19	3/14/19 10:45	DJM
Specific conductance	5.8	2.0	µmhos/cm	1		SM21-22 2510B	3/13/19	3/13/19 12:58	KMV



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-B5 (0-5)

Sampled: 3/11/2019 09:45

Sample ID: 19C0442-09

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.10	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:09	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.0010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:09	MFF
Benzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:09	MFF
Bromobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:09	MFF
Bromochloromethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:09	MFF
Bromodichloromethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:09	MFF
Bromoform	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:09	MFF
Bromomethane	ND	0.010	mg/Kg dry	1	V-34	SW-846 8260C	3/13/19	3/14/19 11:09	MFF
2-Butanone (MEK)	ND	0.041	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:09	MFF
n-Butylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:09	MFF
sec-Butylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:09	MFF
tert-Butylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:09	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.0010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:09	MFF
Carbon Disulfide	ND	0.0061	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:09	MFF
Carbon Tetrachloride	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:09	MFF
Chlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:09	MFF
Chlorodibromomethane	ND	0.0010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:09	MFF
Chloroethane	ND	0.010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:09	MFF
Chloroform	ND	0.0041	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:09	MFF
Chloromethane	ND	0.010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:09	MFF
2-Chlorotoluene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:09	MFF
4-Chlorotoluene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:09	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:09	MFF
1,2-Dibromoethane (EDB)	ND	0.0010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:09	MFF
Dibromomethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:09	MFF
1,2-Dichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:09	MFF
1,3-Dichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:09	MFF
1,4-Dichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:09	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:09	MFF
1,1-Dichloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:09	MFF
1,2-Dichloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:09	MFF
1,1-Dichloroethylene	ND	0.0041	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:09	MFF
cis-1,2-Dichloroethylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:09	MFF
trans-1,2-Dichloroethylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:09	MFF
1,2-Dichloropropane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:09	MFF
1,3-Dichloropropane	ND	0.0010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:09	MFF
2,2-Dichloropropane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:09	MFF
1,1-Dichloropropene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:09	MFF
cis-1,3-Dichloropropene	ND	0.0010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:09	MFF
trans-1,3-Dichloropropene	ND	0.0010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:09	MFF
Diethyl Ether	ND	0.010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:09	MFF
Diisopropyl Ether (DIPE)	ND	0.0010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:09	MFF
1,4-Dioxane	ND	0.10	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:09	MFF
Ethylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:09	MFF

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-B5 (0-5)

Sampled: 3/11/2019 09:45

Sample ID: 19C0442-09

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:09	MFF
2-Hexanone (MBK)	ND	0.020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:09	MFF
Isopropylbenzene (Cumene)	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:09	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:09	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0041	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:09	MFF
Methylene Chloride	ND	0.010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:09	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:09	MFF
Naphthalene	ND	0.0041	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:09	MFF
n-Propylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:09	MFF
Styrene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:09	MFF
1,1,1,2-Tetrachloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:09	MFF
1,1,2,2-Tetrachloroethane	ND	0.0010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:09	MFF
Tetrachloroethylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:09	MFF
Tetrahydrofuran	ND	0.010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:09	MFF
Toluene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:09	MFF
1,2,3-Trichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:09	MFF
1,2,4-Trichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:09	MFF
1,1,1-Trichloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:09	MFF
1,1,2-Trichloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:09	MFF
Trichloroethylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:09	MFF
Trichlorofluoromethane (Freon 11)	ND	0.010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:09	MFF
1,2,3-Trichloropropane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:09	MFF
1,2,4-Trimethylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:09	MFF
1,3,5-Trimethylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:09	MFF
Vinyl Chloride	ND	0.010	mg/Kg dry	1	L-04	SW-846 8260C	3/13/19	3/14/19 11:09	MFF
m+p Xylene	ND	0.0041	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:09	MFF
o-Xylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:09	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	99.1	70-130	
Toluene-d8	93.9	70-130	
4-Bromofluorobenzene	96.2	70-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-B5 (0-5)

Sampled: 3/11/2019 09:45

Sample ID: 19C0442-09

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.38	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 20:38	IMR
Acenaphthylene	ND	0.38	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 20:38	IMR
Acetophenone	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 20:38	IMR
Aniline	ND	0.75	mg/Kg dry	2	V-34	SW-846 8270D	3/14/19	3/16/19 20:38	IMR
Anthracene	ND	0.38	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 20:38	IMR
Benzo(a)anthracene	0.97	0.38	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 20:38	IMR
Benzo(a)pyrene	1.1	0.38	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 20:38	IMR
Benzo(b)fluoranthene	1.4	0.38	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 20:38	IMR
Benzo(g,h,i)perylene	0.61	0.38	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 20:38	IMR
Benzo(k)fluoranthene	0.51	0.38	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 20:38	IMR
Bis(2-chloroethoxy)methane	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 20:38	IMR
Bis(2-chloroethyl)ether	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 20:38	IMR
Bis(2-chloroisopropyl)ether	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 20:38	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 20:38	IMR
4-Bromophenylphenylether	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 20:38	IMR
Butylbenzylphthalate	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 20:38	IMR
4-Chloroaniline	ND	1.5	mg/Kg dry	2	V-34	SW-846 8270D	3/14/19	3/16/19 20:38	IMR
2-Chloronaphthalene	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 20:38	IMR
2-Chlorophenol	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 20:38	IMR
Chrysene	1.1	0.38	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 20:38	IMR
Dibenz(a,h)anthracene	ND	0.38	mg/Kg dry	2	V-20	SW-846 8270D	3/14/19	3/16/19 20:38	IMR
Dibenzofuran	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 20:38	IMR
Di-n-butylphthalate	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 20:38	IMR
1,2-Dichlorobenzene	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 20:38	IMR
1,3-Dichlorobenzene	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 20:38	IMR
1,4-Dichlorobenzene	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 20:38	IMR
3,3-Dichlorobenzidine	ND	0.38	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 20:38	IMR
2,4-Dichlorophenol	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 20:38	IMR
Diethylphthalate	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 20:38	IMR
2,4-Dimethylphenol	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 20:38	IMR
Dimethylphthalate	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 20:38	IMR
2,4-Dinitrophenol	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 20:38	IMR
2,4-Dinitrotoluene	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 20:38	IMR
2,6-Dinitrotoluene	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 20:38	IMR
Di-n-octylphthalate	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 20:38	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 20:38	IMR
Fluoranthene	1.7	0.38	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 20:38	IMR
Fluorene	ND	0.38	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 20:38	IMR
Hexachlorobenzene	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 20:38	IMR
Hexachlorobutadiene	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 20:38	IMR
Hexachloroethane	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 20:38	IMR
Indeno(1,2,3-cd)pyrene	0.71	0.38	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 20:38	IMR
Isophorone	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 20:38	IMR
2-Methylnaphthalene	ND	0.38	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 20:38	IMR

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-B5 (0-5)

Sampled: 3/11/2019 09:45

Sample ID: 19C0442-09

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 20:38	IMR
3/4-Methylphenol	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 20:38	IMR
Naphthalene	ND	0.38	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 20:38	IMR
Nitrobenzene	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 20:38	IMR
2-Nitrophenol	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 20:38	IMR
4-Nitrophenol	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 20:38	IMR
Pentachlorophenol	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 20:38	IMR
Phenanthrene	0.97	0.38	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 20:38	IMR
Phenol	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 20:38	IMR
Pyrene	2.2	0.38	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 20:38	IMR
1,2,4-Trichlorobenzene	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 20:38	IMR
2,4,5-Trichlorophenol	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 20:38	IMR
2,4,6-Trichlorophenol	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/14/19	3/16/19 20:38	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	79.8	30-130	
Phenol-d6	80.4	30-130	
Nitrobenzene-d5	77.7	30-130	
2-Fluorobiphenyl	82.3	30-130	
2,4,6-Tribromophenol	85.0	30-130	
p-Terphenyl-d14	92.7	30-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-B5 (0-5)

Sampled: 3/11/2019 09:45

Sample ID: 19C0442-09

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 22:17	JMB
Aroclor-1221 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 22:17	JMB
Aroclor-1232 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 22:17	JMB
Aroclor-1242 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 22:17	JMB
Aroclor-1248 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 22:17	JMB
Aroclor-1254 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 22:17	JMB
Aroclor-1260 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 22:17	JMB
Aroclor-1262 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 22:17	JMB
Aroclor-1268 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 22:17	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		89.3	30-150					3/14/19 22:17	
Decachlorobiphenyl [2]		91.4	30-150					3/14/19 22:17	
Tetrachloro-m-xylene [1]		97.3	30-150					3/14/19 22:17	
Tetrachloro-m-xylene [2]		95.4	30-150					3/14/19 22:17	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-B5 (0-5)

Sampled: 3/11/2019 09:45

Sample ID: 19C0442-09

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	540	92	mg/Kg dry	10		SW-846 8100 Modified	3/14/19	3/17/19 17:00	RMW
<b>Surrogates</b>		<b>% Recovery</b>	<b>Recovery Limits</b>		<b>Flag/Qual</b>				
2-Fluorobiphenyl		56.9	40-140					3/17/19 17:00	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-B5 (0-5)

Sampled: 3/11/2019 09:45

Sample ID: 19C0442-09

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.8	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:08	QNW
Arsenic	5.0	1.8	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:08	QNW
Barium	31	1.8	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:08	QNW
Beryllium	0.26	0.18	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:08	QNW
Cadmium	0.41	0.18	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:08	QNW
Chromium	14	0.37	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:08	QNW
Lead	50	0.55	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:08	QNW
Mercury	0.035	0.028	mg/Kg dry	1		SW-846 7471B	3/13/19	3/14/19 12:23	TBC
Nickel	11	0.37	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:08	QNW
Selenium	ND	3.7	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:08	QNW
Silver	ND	0.37	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:08	QNW
Thallium	ND	1.8	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:08	QNW
Vanadium	19	0.74	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:08	QNW
Zinc	48	0.74	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:08	QNW

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-B5 (0-5)

Sampled: 3/11/2019 09:45

Sample ID: 19C0442-09

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	89.8		% Wt	1		SM 2540G	3/18/19	3/18/19 15:50	VLH
Ignitability	Absent		present/absent	1		SW-846 1030	3/13/19	3/13/19 16:45	DJM
pH @19.2°C	7.9		pH Units	1	H-03	SW-846 9045C	3/13/19	3/13/19 10:50	IS
Reactive Cyanide	ND	4.0	mg/Kg	1		SW-846 9014	3/13/19	3/14/19 11:20	DJM
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	3/13/19	3/14/19 10:45	DJM
Specific conductance	7.8	2.0	µmhos/cm	1		SM21-22 2510B	3/13/19	3/13/19 12:58	KMV



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-B5 (5-10)

Sampled: 3/11/2019 09:50

Sample ID: 19C0442-10

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.086	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:31	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00086	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:31	MFF
Benzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:31	MFF
Bromobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:31	MFF
Bromochloromethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:31	MFF
Bromodichloromethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:31	MFF
Bromoform	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:31	MFF
Bromomethane	ND	0.0086	mg/Kg dry	1	V-34	SW-846 8260C	3/13/19	3/13/19 15:31	MFF
2-Butanone (MEK)	ND	0.034	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:31	MFF
n-Butylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:31	MFF
sec-Butylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:31	MFF
tert-Butylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:31	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00086	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:31	MFF
Carbon Disulfide	ND	0.0051	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:31	MFF
Carbon Tetrachloride	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:31	MFF
Chlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:31	MFF
Chlorodibromomethane	ND	0.00086	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:31	MFF
Chloroethane	ND	0.0086	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:31	MFF
Chloroform	ND	0.0034	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:31	MFF
Chloromethane	ND	0.0086	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:31	MFF
2-Chlorotoluene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:31	MFF
4-Chlorotoluene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:31	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:31	MFF
1,2-Dibromoethane (EDB)	ND	0.00086	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:31	MFF
Dibromomethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:31	MFF
1,2-Dichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:31	MFF
1,3-Dichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:31	MFF
1,4-Dichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:31	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0086	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:31	MFF
1,1-Dichloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:31	MFF
1,2-Dichloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:31	MFF
1,1-Dichloroethylene	ND	0.0034	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:31	MFF
cis-1,2-Dichloroethylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:31	MFF
trans-1,2-Dichloroethylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:31	MFF
1,2-Dichloropropane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:31	MFF
1,3-Dichloropropane	ND	0.00086	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:31	MFF
2,2-Dichloropropane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:31	MFF
1,1-Dichloropropene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:31	MFF
cis-1,3-Dichloropropene	ND	0.00086	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:31	MFF
trans-1,3-Dichloropropene	ND	0.00086	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:31	MFF
Diethyl Ether	ND	0.0086	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:31	MFF
Diisopropyl Ether (DIPE)	ND	0.00086	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:31	MFF
1,4-Dioxane	ND	0.086	mg/Kg dry	1	V-16	SW-846 8260C	3/13/19	3/13/19 15:31	MFF
Ethylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:31	MFF

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-B5 (5-10)

Sampled: 3/11/2019 09:50

Sample ID: 19C0442-10

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:31	MFF
2-Hexanone (MBK)	ND	0.017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:31	MFF
Isopropylbenzene (Cumene)	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:31	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:31	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0034	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:31	MFF
Methylene Chloride	ND	0.0086	mg/Kg dry	1	R-05	SW-846 8260C	3/13/19	3/13/19 15:31	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:31	MFF
Naphthalene	ND	0.0034	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:31	MFF
n-Propylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:31	MFF
Styrene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:31	MFF
1,1,1,2-Tetrachloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:31	MFF
1,1,2,2-Tetrachloroethane	ND	0.00086	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:31	MFF
Tetrachloroethylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:31	MFF
Tetrahydrofuran	ND	0.0086	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:31	MFF
Toluene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:31	MFF
1,2,3-Trichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:31	MFF
1,2,4-Trichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:31	MFF
1,1,1-Trichloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:31	MFF
1,1,2-Trichloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:31	MFF
Trichloroethylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:31	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0086	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:31	MFF
1,2,3-Trichloropropane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:31	MFF
1,2,4-Trimethylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:31	MFF
1,3,5-Trimethylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:31	MFF
Vinyl Chloride	ND	0.0086	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:31	MFF
m+p Xylene	ND	0.0034	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:31	MFF
o-Xylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:31	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	101	70-130	
Toluene-d8	95.8	70-130	
4-Bromofluorobenzene	96.2	70-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-B5 (5-10)

Sampled: 3/11/2019 09:50

Sample ID: 19C0442-10

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatle Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.95	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 21:06	IMR
Acenaphthylene	ND	0.95	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 21:06	IMR
Acetophenone	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 21:06	IMR
Aniline	ND	1.9	mg/Kg dry	5	V-34	SW-846 8270D	3/14/19	3/16/19 21:06	IMR
Anthracene	ND	0.95	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 21:06	IMR
Benzo(a)anthracene	1.9	0.95	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 21:06	IMR
Benzo(a)pyrene	1.9	0.95	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 21:06	IMR
Benzo(b)fluoranthene	2.6	0.95	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 21:06	IMR
Benzo(g,h,i)perylene	1.4	0.95	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 21:06	IMR
Benzo(k)fluoranthene	ND	0.95	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 21:06	IMR
Bis(2-chloroethoxy)methane	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 21:06	IMR
Bis(2-chloroethyl)ether	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 21:06	IMR
Bis(2-chloroisopropyl)ether	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 21:06	IMR
Bis(2-Ethylhexyl)phthalate	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 21:06	IMR
4-Bromophenylphenylether	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 21:06	IMR
Butylbenzylphthalate	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 21:06	IMR
4-Chloroaniline	ND	3.7	mg/Kg dry	5	V-34	SW-846 8270D	3/14/19	3/16/19 21:06	IMR
2-Chloronaphthalene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 21:06	IMR
2-Chlorophenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 21:06	IMR
Chrysene	2.2	0.95	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 21:06	IMR
Dibenz(a,h)anthracene	ND	0.95	mg/Kg dry	5	V-20	SW-846 8270D	3/14/19	3/16/19 21:06	IMR
Dibenzofuran	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 21:06	IMR
Di-n-butylphthalate	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 21:06	IMR
1,2-Dichlorobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 21:06	IMR
1,3-Dichlorobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 21:06	IMR
1,4-Dichlorobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 21:06	IMR
3,3-Dichlorobenzidine	ND	0.95	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 21:06	IMR
2,4-Dichlorophenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 21:06	IMR
Diethylphthalate	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 21:06	IMR
2,4-Dimethylphenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 21:06	IMR
Dimethylphthalate	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 21:06	IMR
2,4-Dinitrophenol	ND	3.7	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 21:06	IMR
2,4-Dinitrotoluene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 21:06	IMR
2,6-Dinitrotoluene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 21:06	IMR
Di-n-octylphthalate	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 21:06	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 21:06	IMR
Fluoranthene	4.9	0.95	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 21:06	IMR
Fluorene	ND	0.95	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 21:06	IMR
Hexachlorobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 21:06	IMR
Hexachlorobutadiene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 21:06	IMR
Hexachloroethane	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 21:06	IMR
Indeno(1,2,3-cd)pyrene	1.4	0.95	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 21:06	IMR
Isophorone	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 21:06	IMR
2-Methylnaphthalene	ND	0.95	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 21:06	IMR

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-B5 (5-10)

Sampled: 3/11/2019 09:50

Sample ID: 19C0442-10

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 21:06	IMR
3/4-Methylphenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 21:06	IMR
Naphthalene	ND	0.95	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 21:06	IMR
Nitrobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 21:06	IMR
2-Nitrophenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 21:06	IMR
4-Nitrophenol	ND	3.7	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 21:06	IMR
Pentachlorophenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 21:06	IMR
Phenanthrene	2.9	0.95	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 21:06	IMR
Phenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 21:06	IMR
Pyrene	4.3	0.95	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 21:06	IMR
1,2,4-Trichlorobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 21:06	IMR
2,4,5-Trichlorophenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 21:06	IMR
2,4,6-Trichlorophenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/16/19 21:06	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	80.7	30-130	
Phenol-d6	79.0	30-130	
Nitrobenzene-d5	76.9	30-130	
2-Fluorobiphenyl	80.1	30-130	
2,4,6-Tribromophenol	79.2	30-130	
p-Terphenyl-d14	89.8	30-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-B5 (5-10)

Sampled: 3/11/2019 09:50

Sample ID: 19C0442-10

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 22:35	JMB
Aroclor-1221 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 22:35	JMB
Aroclor-1232 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 22:35	JMB
Aroclor-1242 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 22:35	JMB
Aroclor-1248 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 22:35	JMB
Aroclor-1254 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 22:35	JMB
Aroclor-1260 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 22:35	JMB
Aroclor-1262 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 22:35	JMB
Aroclor-1268 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 22:35	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		82.7	30-150					3/14/19 22:35	
Decachlorobiphenyl [2]		85.4	30-150					3/14/19 22:35	
Tetrachloro-m-xylene [1]		97.7	30-150					3/14/19 22:35	
Tetrachloro-m-xylene [2]		96.8	30-150					3/14/19 22:35	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-B5 (5-10)

Sampled: 3/11/2019 09:50

Sample ID: 19C0442-10

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	640	93	mg/Kg dry	10		SW-846 8100 Modified	3/14/19	3/17/19 17:20	RMW
<b>Surrogates</b>		<b>% Recovery</b>	<b>Recovery Limits</b>		<b>Flag/Qual</b>				
2-Fluorobiphenyl		49.9	40-140					3/17/19 17:20	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-B5 (5-10)

Sampled: 3/11/2019 09:50

Sample ID: 19C0442-10

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.8	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:12	QNW
Arsenic	5.7	1.8	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:12	QNW
Barium	30	1.8	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:12	QNW
Beryllium	0.27	0.18	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:12	QNW
Cadmium	0.40	0.18	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:12	QNW
Chromium	14	0.37	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:12	QNW
Lead	30	0.55	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:12	QNW
Mercury	0.050	0.027	mg/Kg dry	1		SW-846 7471B	3/13/19	3/14/19 12:29	TBC
Nickel	11	0.37	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:12	QNW
Selenium	ND	3.7	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:12	QNW
Silver	ND	0.37	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:12	QNW
Thallium	ND	1.8	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:12	QNW
Vanadium	22	0.73	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:12	QNW
Zinc	42	0.73	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:12	QNW

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-B5 (5-10)

Sampled: 3/11/2019 09:50

Sample ID: 19C0442-10

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	89.3		% Wt	1		SM 2540G	3/18/19	3/18/19 15:50	VLH
Ignitability	Absent		present/absent	1		SW-846 1030	3/13/19	3/13/19 16:45	DJM
pH @19.5°C	8.0		pH Units	1	H-03	SW-846 9045C	3/13/19	3/13/19 10:50	IS
Reactive Cyanide	ND	4.0	mg/Kg	1		SW-846 9014	3/13/19	3/14/19 11:20	DJM
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	3/13/19	3/14/19 10:45	DJM
Specific conductance	13	2.0	µmhos/cm	1		SM21-22 2510B	3/13/19	3/13/19 12:58	KMV



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-C5 (0-5)

Sampled: 3/11/2019 10:15

Sample ID: 19C0442-11

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.092	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:55	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00092	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:55	MFF
Benzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:55	MFF
Bromobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:55	MFF
Bromochloromethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:55	MFF
Bromodichloromethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:55	MFF
Bromoform	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:55	MFF
Bromomethane	ND	0.0092	mg/Kg dry	1	V-34	SW-846 8260C	3/13/19	3/13/19 15:55	MFF
2-Butanone (MEK)	ND	0.037	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:55	MFF
n-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:55	MFF
sec-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:55	MFF
tert-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:55	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00092	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:55	MFF
Carbon Disulfide	ND	0.0055	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:55	MFF
Carbon Tetrachloride	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:55	MFF
Chlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:55	MFF
Chlorodibromomethane	ND	0.00092	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:55	MFF
Chloroethane	ND	0.0092	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:55	MFF
Chloroform	ND	0.0037	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:55	MFF
Chloromethane	ND	0.0092	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:55	MFF
2-Chlorotoluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:55	MFF
4-Chlorotoluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:55	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:55	MFF
1,2-Dibromoethane (EDB)	ND	0.00092	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:55	MFF
Dibromomethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:55	MFF
1,2-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:55	MFF
1,3-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:55	MFF
1,4-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:55	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0092	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:55	MFF
1,1-Dichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:55	MFF
1,2-Dichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:55	MFF
1,1-Dichloroethylene	ND	0.0037	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:55	MFF
cis-1,2-Dichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:55	MFF
trans-1,2-Dichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:55	MFF
1,2-Dichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:55	MFF
1,3-Dichloropropane	ND	0.00092	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:55	MFF
2,2-Dichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:55	MFF
1,1-Dichloropropene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:55	MFF
cis-1,3-Dichloropropene	ND	0.00092	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:55	MFF
trans-1,3-Dichloropropene	ND	0.00092	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:55	MFF
Diethyl Ether	ND	0.0092	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:55	MFF
Diisopropyl Ether (DIPE)	ND	0.00092	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:55	MFF
1,4-Dioxane	ND	0.092	mg/Kg dry	1	V-16	SW-846 8260C	3/13/19	3/13/19 15:55	MFF
Ethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:55	MFF

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-C5 (0-5)

Sampled: 3/11/2019 10:15

Sample ID: 19C0442-11

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:55	MFF
2-Hexanone (MBK)	ND	0.018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:55	MFF
Isopropylbenzene (Cumene)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:55	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:55	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0037	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:55	MFF
Methylene Chloride	ND	0.0092	mg/Kg dry	1	R-05	SW-846 8260C	3/13/19	3/13/19 15:55	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:55	MFF
Naphthalene	ND	0.0037	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:55	MFF
n-Propylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:55	MFF
Styrene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:55	MFF
1,1,1,2-Tetrachloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:55	MFF
1,1,2,2-Tetrachloroethane	ND	0.00092	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:55	MFF
Tetrachloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:55	MFF
Tetrahydrofuran	ND	0.0092	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:55	MFF
Toluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:55	MFF
1,2,3-Trichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:55	MFF
1,2,4-Trichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:55	MFF
1,1,1-Trichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:55	MFF
1,1,2-Trichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:55	MFF
Trichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:55	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0092	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:55	MFF
1,2,3-Trichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:55	MFF
1,2,4-Trimethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:55	MFF
1,3,5-Trimethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:55	MFF
Vinyl Chloride	ND	0.0092	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:55	MFF
m+p Xylene	ND	0.0037	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:55	MFF
o-Xylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:55	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	101	70-130	3/13/19 15:55
Toluene-d8	93.7	70-130	3/13/19 15:55
4-Bromofluorobenzene	94.5	70-130	3/13/19 15:55

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-C5 (0-5)

Sampled: 3/11/2019 10:15

Sample ID: 19C0442-11

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.21	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 21:33	IMR
Acenaphthylene	ND	0.21	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 21:33	IMR
Acetophenone	ND	0.42	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 21:33	IMR
Aniline	ND	0.42	mg/Kg dry	1	V-34	SW-846 8270D	3/14/19	3/16/19 21:33	IMR
Anthracene	ND	0.21	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 21:33	IMR
Benzo(a)anthracene	ND	0.21	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 21:33	IMR
Benzo(a)pyrene	ND	0.21	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 21:33	IMR
Benzo(b)fluoranthene	ND	0.21	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 21:33	IMR
Benzo(g,h,i)perylene	ND	0.21	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 21:33	IMR
Benzo(k)fluoranthene	ND	0.21	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 21:33	IMR
Bis(2-chloroethoxy)methane	ND	0.42	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 21:33	IMR
Bis(2-chloroethyl)ether	ND	0.42	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 21:33	IMR
Bis(2-chloroisopropyl)ether	ND	0.42	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 21:33	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.42	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 21:33	IMR
4-Bromophenylphenylether	ND	0.42	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 21:33	IMR
Butylbenzylphthalate	ND	0.42	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 21:33	IMR
4-Chloroaniline	ND	0.81	mg/Kg dry	1	V-34	SW-846 8270D	3/14/19	3/16/19 21:33	IMR
2-Chloronaphthalene	ND	0.42	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 21:33	IMR
2-Chlorophenol	ND	0.42	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 21:33	IMR
Chrysene	ND	0.21	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 21:33	IMR
Dibenz(a,h)anthracene	ND	0.21	mg/Kg dry	1	V-20	SW-846 8270D	3/14/19	3/16/19 21:33	IMR
Dibenzofuran	ND	0.42	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 21:33	IMR
Di-n-butylphthalate	ND	0.42	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 21:33	IMR
1,2-Dichlorobenzene	ND	0.42	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 21:33	IMR
1,3-Dichlorobenzene	ND	0.42	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 21:33	IMR
1,4-Dichlorobenzene	ND	0.42	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 21:33	IMR
3,3-Dichlorobenzidine	ND	0.21	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 21:33	IMR
2,4-Dichlorophenol	ND	0.42	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 21:33	IMR
Diethylphthalate	ND	0.42	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 21:33	IMR
2,4-Dimethylphenol	ND	0.42	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 21:33	IMR
Dimethylphthalate	ND	0.42	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 21:33	IMR
2,4-Dinitrophenol	ND	0.81	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 21:33	IMR
2,4-Dinitrotoluene	ND	0.42	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 21:33	IMR
2,6-Dinitrotoluene	ND	0.42	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 21:33	IMR
Di-n-octylphthalate	ND	0.42	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 21:33	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.42	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 21:33	IMR
Fluoranthene	0.24	0.21	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 21:33	IMR
Fluorene	ND	0.21	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 21:33	IMR
Hexachlorobenzene	ND	0.42	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 21:33	IMR
Hexachlorobutadiene	ND	0.42	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 21:33	IMR
Hexachloroethane	ND	0.42	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 21:33	IMR
Indeno(1,2,3-cd)pyrene	ND	0.21	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 21:33	IMR
Isophorone	ND	0.42	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 21:33	IMR
2-Methylnaphthalene	ND	0.21	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 21:33	IMR

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-C5 (0-5)

Sampled: 3/11/2019 10:15

Sample ID: 19C0442-11

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	0.42	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 21:33	IMR
3/4-Methylphenol	ND	0.42	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 21:33	IMR
Naphthalene	ND	0.21	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 21:33	IMR
Nitrobenzene	ND	0.42	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 21:33	IMR
2-Nitrophenol	ND	0.42	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 21:33	IMR
4-Nitrophenol	ND	0.81	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 21:33	IMR
Pentachlorophenol	ND	0.42	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 21:33	IMR
Phenanthrene	ND	0.21	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 21:33	IMR
Phenol	ND	0.42	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 21:33	IMR
Pyrene	0.28	0.21	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 21:33	IMR
1,2,4-Trichlorobenzene	ND	0.42	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 21:33	IMR
2,4,5-Trichlorophenol	ND	0.42	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 21:33	IMR
2,4,6-Trichlorophenol	ND	0.42	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 21:33	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	74.8	30-130	
Phenol-d6	75.6	30-130	
Nitrobenzene-d5	73.6	30-130	
2-Fluorobiphenyl	81.1	30-130	
2,4,6-Tribromophenol	84.4	30-130	
p-Terphenyl-d14	93.4	30-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-C5 (0-5)

Sampled: 3/11/2019 10:15

Sample ID: 19C0442-11

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.096	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 23:41	JMB
Aroclor-1221 [1]	ND	0.096	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 23:41	JMB
Aroclor-1232 [1]	ND	0.096	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 23:41	JMB
Aroclor-1242 [1]	ND	0.096	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 23:41	JMB
Aroclor-1248 [1]	ND	0.096	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 23:41	JMB
Aroclor-1254 [1]	ND	0.096	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 23:41	JMB
Aroclor-1260 [1]	ND	0.096	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 23:41	JMB
Aroclor-1262 [1]	ND	0.096	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 23:41	JMB
Aroclor-1268 [1]	ND	0.096	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 23:41	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		100	30-150					3/14/19 23:41	
Decachlorobiphenyl [2]		101	30-150					3/14/19 23:41	
Tetrachloro-m-xylene [1]		103	30-150					3/14/19 23:41	
Tetrachloro-m-xylene [2]		108	30-150					3/14/19 23:41	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-C5 (0-5)

Sampled: 3/11/2019 10:15

Sample ID: 19C0442-11

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	320	100	mg/Kg dry	10		SW-846 8100 Modified	3/14/19	3/17/19 17:40	RMW
<b>Surrogates</b>		<b>% Recovery</b>	<b>Recovery Limits</b>		<b>Flag/Qual</b>				
2-Fluorobiphenyl		47.7	40-140					3/17/19 17:40	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-C5 (0-5)

Sampled: 3/11/2019 10:15

Sample ID: 19C0442-11

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	2.1	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:17	QNW
Arsenic	6.5	2.1	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:17	QNW
Barium	35	2.1	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:17	QNW
Beryllium	0.44	0.21	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:17	QNW
Cadmium	0.33	0.21	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:17	QNW
Chromium	15	0.41	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:17	QNW
Lead	16	0.62	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:17	QNW
Mercury	0.037	0.031	mg/Kg dry	1		SW-846 7471B	3/13/19	3/14/19 12:31	TBC
Nickel	10	0.41	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:17	QNW
Selenium	ND	4.1	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:17	QNW
Silver	ND	0.41	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:17	QNW
Thallium	ND	2.1	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:17	QNW
Vanadium	18	0.82	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:17	QNW
Zinc	27	0.82	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:17	QNW

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-C5 (0-5)

Sampled: 3/11/2019 10:15

Sample ID: 19C0442-11

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	81.5		% Wt	1		SM 2540G	3/18/19	3/18/19 15:50	VLH
Ignitability	Absent		present/absent	1		SW-846 1030	3/13/19	3/13/19 16:45	DJM
pH @23.4°C	7.1		pH Units	1	H-03	SW-846 9045C	3/13/19	3/13/19 10:50	IS
Reactive Cyanide	ND	4.0	mg/Kg	1		SW-846 9014	3/13/19	3/14/19 11:20	DJM
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	3/13/19	3/14/19 10:45	DJM
Specific conductance	21	2.0	µmhos/cm	1		SM21-22 2510B	3/13/19	3/13/19 12:58	KMV



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-C5 (5-10)

Sampled: 3/11/2019 10:20

Sample ID: 19C0442-12

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.094	mg/Kg dry	1	R-05	SW-846 8260C	3/13/19	3/13/19 13:55	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00094	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:55	MFF
Benzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:55	MFF
Bromobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:55	MFF
Bromochloromethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:55	MFF
Bromodichloromethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:55	MFF
Bromoform	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:55	MFF
Bromomethane	ND	0.0094	mg/Kg dry	1	V-34	SW-846 8260C	3/13/19	3/13/19 13:55	MFF
2-Butanone (MEK)	ND	0.037	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:55	MFF
n-Butylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:55	MFF
sec-Butylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:55	MFF
tert-Butylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:55	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00094	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:55	MFF
Carbon Disulfide	ND	0.0056	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:55	MFF
Carbon Tetrachloride	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:55	MFF
Chlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:55	MFF
Chlorodibromomethane	ND	0.00094	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:55	MFF
Chloroethane	ND	0.0094	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:55	MFF
Chloroform	ND	0.0037	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:55	MFF
Chloromethane	ND	0.0094	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:55	MFF
2-Chlorotoluene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:55	MFF
4-Chlorotoluene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:55	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0037	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:55	MFF
1,2-Dibromoethane (EDB)	ND	0.00094	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:55	MFF
Dibromomethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:55	MFF
1,2-Dichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:55	MFF
1,3-Dichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:55	MFF
1,4-Dichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:55	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0094	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:55	MFF
1,1-Dichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:55	MFF
1,2-Dichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:55	MFF
1,1-Dichloroethylene	ND	0.0037	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:55	MFF
cis-1,2-Dichloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:55	MFF
trans-1,2-Dichloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:55	MFF
1,2-Dichloropropane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:55	MFF
1,3-Dichloropropane	ND	0.00094	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:55	MFF
2,2-Dichloropropane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:55	MFF
1,1-Dichloropropene	ND	0.0037	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:55	MFF
cis-1,3-Dichloropropene	ND	0.00094	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:55	MFF
trans-1,3-Dichloropropene	ND	0.00094	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:55	MFF
Diethyl Ether	ND	0.0094	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:55	MFF
Diisopropyl Ether (DIPE)	ND	0.00094	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:55	MFF
1,4-Dioxane	ND	0.19	mg/Kg dry	1	V-16	SW-846 8260C	3/13/19	3/13/19 13:55	MFF
Ethylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:55	MFF

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-C5 (5-10)

Sampled: 3/11/2019 10:20

Sample ID: 19C0442-12

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:55	MFF
2-Hexanone (MBK)	ND	0.019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:55	MFF
Isopropylbenzene (Cumene)	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:55	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:55	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0037	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:55	MFF
Methylene Chloride	ND	0.0094	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:55	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:55	MFF
Naphthalene	ND	0.0037	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:55	MFF
n-Propylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:55	MFF
Styrene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:55	MFF
1,1,1,2-Tetrachloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:55	MFF
1,1,2,2-Tetrachloroethane	ND	0.00094	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:55	MFF
Tetrachloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:55	MFF
Tetrahydrofuran	ND	0.0094	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:55	MFF
Toluene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:55	MFF
1,2,3-Trichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:55	MFF
1,2,4-Trichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:55	MFF
1,1,1-Trichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:55	MFF
1,1,2-Trichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:55	MFF
Trichloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:55	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0094	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:55	MFF
1,2,3-Trichloropropane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:55	MFF
1,2,4-Trimethylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:55	MFF
1,3,5-Trimethylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:55	MFF
Vinyl Chloride	ND	0.0094	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:55	MFF
m+p Xylene	ND	0.0037	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:55	MFF
o-Xylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 13:55	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	89.7	70-130	
Toluene-d8	97.7	70-130	
4-Bromofluorobenzene	102	70-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-C5 (5-10)

Sampled: 3/11/2019 10:20

Sample ID: 19C0442-12

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.21	mg/Kg dry	1		SW-846 8270D	3/14/19	3/18/19 13:41	IMR
Acenaphthylene	ND	0.21	mg/Kg dry	1		SW-846 8270D	3/14/19	3/18/19 13:41	IMR
Acetophenone	ND	0.43	mg/Kg dry	1		SW-846 8270D	3/14/19	3/18/19 13:41	IMR
Aniline	ND	0.43	mg/Kg dry	1	V-34	SW-846 8270D	3/14/19	3/18/19 13:41	IMR
Anthracene	ND	0.21	mg/Kg dry	1		SW-846 8270D	3/14/19	3/18/19 13:41	IMR
Benzo(a)anthracene	ND	0.21	mg/Kg dry	1		SW-846 8270D	3/14/19	3/18/19 13:41	IMR
Benzo(a)pyrene	ND	0.21	mg/Kg dry	1		SW-846 8270D	3/14/19	3/18/19 13:41	IMR
Benzo(b)fluoranthene	ND	0.21	mg/Kg dry	1		SW-846 8270D	3/14/19	3/18/19 13:41	IMR
Benzo(g,h,i)perylene	ND	0.21	mg/Kg dry	1		SW-846 8270D	3/14/19	3/18/19 13:41	IMR
Benzo(k)fluoranthene	ND	0.21	mg/Kg dry	1		SW-846 8270D	3/14/19	3/18/19 13:41	IMR
Bis(2-chloroethoxy)methane	ND	0.43	mg/Kg dry	1		SW-846 8270D	3/14/19	3/18/19 13:41	IMR
Bis(2-chloroethyl)ether	ND	0.43	mg/Kg dry	1		SW-846 8270D	3/14/19	3/18/19 13:41	IMR
Bis(2-chloroisopropyl)ether	ND	0.43	mg/Kg dry	1		SW-846 8270D	3/14/19	3/18/19 13:41	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.43	mg/Kg dry	1		SW-846 8270D	3/14/19	3/18/19 13:41	IMR
4-Bromophenylphenylether	ND	0.43	mg/Kg dry	1		SW-846 8270D	3/14/19	3/18/19 13:41	IMR
Butylbenzylphthalate	ND	0.43	mg/Kg dry	1		SW-846 8270D	3/14/19	3/18/19 13:41	IMR
4-Chloroaniline	ND	0.83	mg/Kg dry	1	V-34	SW-846 8270D	3/14/19	3/18/19 13:41	IMR
2-Chloronaphthalene	ND	0.43	mg/Kg dry	1		SW-846 8270D	3/14/19	3/18/19 13:41	IMR
2-Chlorophenol	ND	0.43	mg/Kg dry	1		SW-846 8270D	3/14/19	3/18/19 13:41	IMR
Chrysene	ND	0.21	mg/Kg dry	1		SW-846 8270D	3/14/19	3/18/19 13:41	IMR
Dibenz(a,h)anthracene	ND	0.21	mg/Kg dry	1		SW-846 8270D	3/14/19	3/18/19 13:41	IMR
Dibenzofuran	ND	0.43	mg/Kg dry	1		SW-846 8270D	3/14/19	3/18/19 13:41	IMR
Di-n-butylphthalate	ND	0.43	mg/Kg dry	1		SW-846 8270D	3/14/19	3/18/19 13:41	IMR
1,2-Dichlorobenzene	ND	0.43	mg/Kg dry	1		SW-846 8270D	3/14/19	3/18/19 13:41	IMR
1,3-Dichlorobenzene	ND	0.43	mg/Kg dry	1		SW-846 8270D	3/14/19	3/18/19 13:41	IMR
1,4-Dichlorobenzene	ND	0.43	mg/Kg dry	1		SW-846 8270D	3/14/19	3/18/19 13:41	IMR
3,3-Dichlorobenzidine	ND	0.21	mg/Kg dry	1		SW-846 8270D	3/14/19	3/18/19 13:41	IMR
2,4-Dichlorophenol	ND	0.43	mg/Kg dry	1		SW-846 8270D	3/14/19	3/18/19 13:41	IMR
Diethylphthalate	ND	0.43	mg/Kg dry	1		SW-846 8270D	3/14/19	3/18/19 13:41	IMR
2,4-Dimethylphenol	ND	0.43	mg/Kg dry	1		SW-846 8270D	3/14/19	3/18/19 13:41	IMR
Dimethylphthalate	ND	0.43	mg/Kg dry	1		SW-846 8270D	3/14/19	3/18/19 13:41	IMR
2,4-Dinitrophenol	ND	0.83	mg/Kg dry	1		SW-846 8270D	3/14/19	3/18/19 13:41	IMR
2,4-Dinitrotoluene	ND	0.43	mg/Kg dry	1		SW-846 8270D	3/14/19	3/18/19 13:41	IMR
2,6-Dinitrotoluene	ND	0.43	mg/Kg dry	1		SW-846 8270D	3/14/19	3/18/19 13:41	IMR
Di-n-octylphthalate	ND	0.43	mg/Kg dry	1		SW-846 8270D	3/14/19	3/18/19 13:41	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.43	mg/Kg dry	1		SW-846 8270D	3/14/19	3/18/19 13:41	IMR
Fluoranthene	ND	0.21	mg/Kg dry	1		SW-846 8270D	3/14/19	3/18/19 13:41	IMR
Fluorene	ND	0.21	mg/Kg dry	1		SW-846 8270D	3/14/19	3/18/19 13:41	IMR
Hexachlorobenzene	ND	0.43	mg/Kg dry	1		SW-846 8270D	3/14/19	3/18/19 13:41	IMR
Hexachlorobutadiene	ND	0.43	mg/Kg dry	1		SW-846 8270D	3/14/19	3/18/19 13:41	IMR
Hexachloroethane	ND	0.43	mg/Kg dry	1		SW-846 8270D	3/14/19	3/18/19 13:41	IMR
Indeno(1,2,3-cd)pyrene	ND	0.21	mg/Kg dry	1		SW-846 8270D	3/14/19	3/18/19 13:41	IMR
Isophorone	ND	0.43	mg/Kg dry	1		SW-846 8270D	3/14/19	3/18/19 13:41	IMR
2-Methylnaphthalene	ND	0.21	mg/Kg dry	1		SW-846 8270D	3/14/19	3/18/19 13:41	IMR

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-C5 (5-10)

Sampled: 3/11/2019 10:20

Sample ID: 19C0442-12

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	0.43	mg/Kg dry	1		SW-846 8270D	3/14/19	3/18/19 13:41	IMR
3/4-Methylphenol	ND	0.43	mg/Kg dry	1		SW-846 8270D	3/14/19	3/18/19 13:41	IMR
Naphthalene	ND	0.21	mg/Kg dry	1		SW-846 8270D	3/14/19	3/18/19 13:41	IMR
Nitrobenzene	ND	0.43	mg/Kg dry	1		SW-846 8270D	3/14/19	3/18/19 13:41	IMR
2-Nitrophenol	ND	0.43	mg/Kg dry	1		SW-846 8270D	3/14/19	3/18/19 13:41	IMR
4-Nitrophenol	ND	0.83	mg/Kg dry	1		SW-846 8270D	3/14/19	3/18/19 13:41	IMR
Pentachlorophenol	ND	0.43	mg/Kg dry	1		SW-846 8270D	3/14/19	3/18/19 13:41	IMR
Phenanthrene	ND	0.21	mg/Kg dry	1		SW-846 8270D	3/14/19	3/18/19 13:41	IMR
Phenol	ND	0.43	mg/Kg dry	1		SW-846 8270D	3/14/19	3/18/19 13:41	IMR
Pyrene	ND	0.21	mg/Kg dry	1		SW-846 8270D	3/14/19	3/18/19 13:41	IMR
1,2,4-Trichlorobenzene	ND	0.43	mg/Kg dry	1		SW-846 8270D	3/14/19	3/18/19 13:41	IMR
2,4,5-Trichlorophenol	ND	0.43	mg/Kg dry	1		SW-846 8270D	3/14/19	3/18/19 13:41	IMR
2,4,6-Trichlorophenol	ND	0.43	mg/Kg dry	1		SW-846 8270D	3/14/19	3/18/19 13:41	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	68.9	30-130	
Phenol-d6	69.6	30-130	
Nitrobenzene-d5	68.0	30-130	
2-Fluorobiphenyl	72.1	30-130	
2,4,6-Tribromophenol	76.5	30-130	
p-Terphenyl-d14	75.3	30-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-C5 (5-10)

Sampled: 3/11/2019 10:20

Sample ID: 19C0442-12

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.10	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 23:59	JMB
Aroclor-1221 [1]	ND	0.10	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 23:59	JMB
Aroclor-1232 [1]	ND	0.10	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 23:59	JMB
Aroclor-1242 [1]	ND	0.10	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 23:59	JMB
Aroclor-1248 [1]	ND	0.10	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 23:59	JMB
Aroclor-1254 [1]	ND	0.10	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 23:59	JMB
Aroclor-1260 [1]	ND	0.10	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 23:59	JMB
Aroclor-1262 [1]	ND	0.10	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 23:59	JMB
Aroclor-1268 [1]	ND	0.10	mg/Kg dry	4		SW-846 8082A	3/13/19	3/14/19 23:59	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		97.1	30-150					3/14/19 23:59	
Decachlorobiphenyl [2]		102	30-150					3/14/19 23:59	
Tetrachloro-m-xylene [1]		97.2	30-150					3/14/19 23:59	
Tetrachloro-m-xylene [2]		97.6	30-150					3/14/19 23:59	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Sampled: 3/11/2019 10:20

Field Sample #: TP-C5 (5-10)

Sample ID: 19C0442-12

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	70	21	mg/Kg dry	2		SW-846 8100 Modified	3/14/19	3/18/19 17:35	RMW
<b>Surrogates</b>		<b>% Recovery</b>	<b>Recovery Limits</b>		<b>Flag/Qual</b>				
2-Fluorobiphenyl		49.4	40-140					3/18/19 17:35	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-C5 (5-10)

Sampled: 3/11/2019 10:20

Sample ID: 19C0442-12

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	2.1	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:22	QNW
Arsenic	6.6	2.1	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:22	QNW
Barium	38	2.1	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:22	QNW
Beryllium	0.50	0.21	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:22	QNW
Cadmium	0.32	0.21	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:22	QNW
Chromium	18	0.43	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:22	QNW
Lead	11	0.64	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:22	QNW
Mercury	ND	0.030	mg/Kg dry	1		SW-846 7471B	3/13/19	3/14/19 12:32	TBC
Nickel	12	0.43	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:22	QNW
Selenium	ND	4.3	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:22	QNW
Silver	ND	0.43	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:22	QNW
Thallium	ND	2.1	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:22	QNW
Vanadium	21	0.86	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:22	QNW
Zinc	28	0.86	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:22	QNW

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-C5 (5-10)

Sampled: 3/11/2019 10:20

Sample ID: 19C0442-12

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	78.5		% Wt	1		SM 2540G	3/18/19	3/18/19 15:50	VLH
Ignitability	Absent		present/absent	1		SW-846 1030	3/13/19	3/13/19 16:45	DJM
pH @19°C	8.0		pH Units	1	H-03	SW-846 9045C	3/13/19	3/13/19 10:50	IS
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	3/13/19	3/14/19 11:20	DJM
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	3/13/19	3/14/19 10:45	DJM
Specific conductance	18	2.0	µmhos/cm	1		SM21-22 2510B	3/13/19	3/13/19 12:58	KMV



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

Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-D5 (0-5)

Sampled: 3/11/2019 11:15

Sample ID: 19C0442-13

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.12	mg/Kg dry	1	R-05	SW-846 8260C	3/13/19	3/13/19 14:23	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:23	MFF
Benzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:23	MFF
Bromobenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:23	MFF
Bromochloromethane	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:23	MFF
Bromodichloromethane	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:23	MFF
Bromoform	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:23	MFF
Bromomethane	ND	0.012	mg/Kg dry	1	V-34	SW-846 8260C	3/13/19	3/13/19 14:23	MFF
2-Butanone (MEK)	ND	0.048	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:23	MFF
n-Butylbenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:23	MFF
sec-Butylbenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:23	MFF
tert-Butylbenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:23	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:23	MFF
Carbon Disulfide	ND	0.0072	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:23	MFF
Carbon Tetrachloride	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:23	MFF
Chlorobenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:23	MFF
Chlorodibromomethane	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:23	MFF
Chloroethane	ND	0.012	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:23	MFF
Chloroform	ND	0.0048	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:23	MFF
Chloromethane	ND	0.012	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:23	MFF
2-Chlorotoluene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:23	MFF
4-Chlorotoluene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:23	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0048	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:23	MFF
1,2-Dibromoethane (EDB)	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:23	MFF
Dibromomethane	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:23	MFF
1,2-Dichlorobenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:23	MFF
1,3-Dichlorobenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:23	MFF
1,4-Dichlorobenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:23	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.012	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:23	MFF
1,1-Dichloroethane	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:23	MFF
1,2-Dichloroethane	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:23	MFF
1,1-Dichloroethylene	ND	0.0048	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:23	MFF
cis-1,2-Dichloroethylene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:23	MFF
trans-1,2-Dichloroethylene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:23	MFF
1,2-Dichloropropane	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:23	MFF
1,3-Dichloropropane	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:23	MFF
2,2-Dichloropropane	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:23	MFF
1,1-Dichloropropene	ND	0.0048	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:23	MFF
cis-1,3-Dichloropropene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:23	MFF
trans-1,3-Dichloropropene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:23	MFF
Diethyl Ether	ND	0.012	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:23	MFF
Diisopropyl Ether (DIPE)	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:23	MFF
1,4-Dioxane	ND	0.24	mg/Kg dry	1	V-16	SW-846 8260C	3/13/19	3/13/19 14:23	MFF
Ethylbenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:23	MFF

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-D5 (0-5)

Sampled: 3/11/2019 11:15

Sample ID: 19C0442-13

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:23	MFF
2-Hexanone (MBK)	ND	0.024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:23	MFF
Isopropylbenzene (Cumene)	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:23	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:23	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0048	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:23	MFF
Methylene Chloride	ND	0.012	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:23	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:23	MFF
Naphthalene	ND	0.0048	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:23	MFF
n-Propylbenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:23	MFF
Styrene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:23	MFF
1,1,1,2-Tetrachloroethane	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:23	MFF
1,1,2,2-Tetrachloroethane	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:23	MFF
Tetrachloroethylene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:23	MFF
Tetrahydrofuran	ND	0.012	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:23	MFF
Toluene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:23	MFF
1,2,3-Trichlorobenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:23	MFF
1,2,4-Trichlorobenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:23	MFF
1,1,1-Trichloroethane	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:23	MFF
1,1,2-Trichloroethane	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:23	MFF
Trichloroethylene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:23	MFF
Trichlorofluoromethane (Freon 11)	ND	0.012	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:23	MFF
1,2,3-Trichloropropane	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:23	MFF
1,2,4-Trimethylbenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:23	MFF
1,3,5-Trimethylbenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:23	MFF
Vinyl Chloride	ND	0.012	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:23	MFF
m+p Xylene	ND	0.0048	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:23	MFF
o-Xylene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:23	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	89.5	70-130	
Toluene-d8	97.0	70-130	
4-Bromofluorobenzene	102	70-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-D5 (0-5)

Sampled: 3/11/2019 11:15

Sample ID: 19C0442-13

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatle Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.84	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 14:09	IMR
Acenaphthylene	ND	0.84	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 14:09	IMR
Acetophenone	ND	1.7	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 14:09	IMR
Aniline	ND	1.7	mg/Kg dry	4	V-34	SW-846 8270D	3/14/19	3/18/19 14:09	IMR
Anthracene	ND	0.84	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 14:09	IMR
Benzo(a)anthracene	1.5	0.84	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 14:09	IMR
Benzo(a)pyrene	1.7	0.84	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 14:09	IMR
Benzo(b)fluoranthene	2.4	0.84	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 14:09	IMR
Benzo(g,h,i)perylene	1.3	0.84	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 14:09	IMR
Benzo(k)fluoranthene	0.89	0.84	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 14:09	IMR
Bis(2-chloroethoxy)methane	ND	1.7	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 14:09	IMR
Bis(2-chloroethyl)ether	ND	1.7	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 14:09	IMR
Bis(2-chloroisopropyl)ether	ND	1.7	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 14:09	IMR
Bis(2-Ethylhexyl)phthalate	ND	1.7	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 14:09	IMR
4-Bromophenylphenylether	ND	1.7	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 14:09	IMR
Butylbenzylphthalate	ND	1.7	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 14:09	IMR
4-Chloroaniline	ND	3.3	mg/Kg dry	4	V-34	SW-846 8270D	3/14/19	3/18/19 14:09	IMR
2-Chloronaphthalene	ND	1.7	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 14:09	IMR
2-Chlorophenol	ND	1.7	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 14:09	IMR
Chrysene	2.0	0.84	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 14:09	IMR
Dibenz(a,h)anthracene	ND	0.84	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 14:09	IMR
Dibenzofuran	ND	1.7	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 14:09	IMR
Di-n-butylphthalate	ND	1.7	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 14:09	IMR
1,2-Dichlorobenzene	ND	1.7	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 14:09	IMR
1,3-Dichlorobenzene	ND	1.7	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 14:09	IMR
1,4-Dichlorobenzene	ND	1.7	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 14:09	IMR
3,3-Dichlorobenzidine	ND	0.84	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 14:09	IMR
2,4-Dichlorophenol	ND	1.7	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 14:09	IMR
Diethylphthalate	ND	1.7	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 14:09	IMR
2,4-Dimethylphenol	ND	1.7	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 14:09	IMR
Dimethylphthalate	ND	1.7	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 14:09	IMR
2,4-Dinitrophenol	ND	3.3	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 14:09	IMR
2,4-Dinitrotoluene	ND	1.7	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 14:09	IMR
2,6-Dinitrotoluene	ND	1.7	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 14:09	IMR
Di-n-octylphthalate	ND	1.7	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 14:09	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	1.7	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 14:09	IMR
Fluoranthene	4.3	0.84	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 14:09	IMR
Fluorene	ND	0.84	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 14:09	IMR
Hexachlorobenzene	ND	1.7	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 14:09	IMR
Hexachlorobutadiene	ND	1.7	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 14:09	IMR
Hexachloroethane	ND	1.7	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 14:09	IMR
Indeno(1,2,3-cd)pyrene	1.2	0.84	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 14:09	IMR
Isophorone	ND	1.7	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 14:09	IMR
2-Methylnaphthalene	ND	0.84	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 14:09	IMR

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-D5 (0-5)

Sampled: 3/11/2019 11:15

Sample ID: 19C0442-13

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	1.7	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 14:09	IMR
3/4-Methylphenol	ND	1.7	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 14:09	IMR
Naphthalene	ND	0.84	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 14:09	IMR
Nitrobenzene	ND	1.7	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 14:09	IMR
2-Nitrophenol	ND	1.7	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 14:09	IMR
4-Nitrophenol	ND	3.3	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 14:09	IMR
Pentachlorophenol	ND	1.7	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 14:09	IMR
Phenanthrene	2.3	0.84	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 14:09	IMR
Phenol	ND	1.7	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 14:09	IMR
Pyrene	3.7	0.84	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 14:09	IMR
1,2,4-Trichlorobenzene	ND	1.7	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 14:09	IMR
2,4,5-Trichlorophenol	ND	1.7	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 14:09	IMR
2,4,6-Trichlorophenol	ND	1.7	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 14:09	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	95.1	30-130	
Phenol-d6	90.9	30-130	
Nitrobenzene-d5	93.2	30-130	
2-Fluorobiphenyl	95.1	30-130	
2,4,6-Tribromophenol	96.5	30-130	
p-Terphenyl-d14	104	30-130	

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-D5 (0-5)

Sampled: 3/11/2019 11:15

Sample ID: 19C0442-13

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.095	mg/Kg dry	4		SW-846 8082A	3/13/19	3/15/19 0:17	JMB
Aroclor-1221 [1]	ND	0.095	mg/Kg dry	4		SW-846 8082A	3/13/19	3/15/19 0:17	JMB
Aroclor-1232 [1]	ND	0.095	mg/Kg dry	4		SW-846 8082A	3/13/19	3/15/19 0:17	JMB
Aroclor-1242 [1]	ND	0.095	mg/Kg dry	4		SW-846 8082A	3/13/19	3/15/19 0:17	JMB
Aroclor-1248 [1]	ND	0.095	mg/Kg dry	4		SW-846 8082A	3/13/19	3/15/19 0:17	JMB
Aroclor-1254 [1]	ND	0.095	mg/Kg dry	4		SW-846 8082A	3/13/19	3/15/19 0:17	JMB
Aroclor-1260 [1]	ND	0.095	mg/Kg dry	4		SW-846 8082A	3/13/19	3/15/19 0:17	JMB
Aroclor-1262 [1]	ND	0.095	mg/Kg dry	4		SW-846 8082A	3/13/19	3/15/19 0:17	JMB
Aroclor-1268 [1]	ND	0.095	mg/Kg dry	4		SW-846 8082A	3/13/19	3/15/19 0:17	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		91.1	30-150					3/15/19 0:17	
Decachlorobiphenyl [2]		96.0	30-150					3/15/19 0:17	
Tetrachloro-m-xylene [1]		98.1	30-150					3/15/19 0:17	
Tetrachloro-m-xylene [2]		96.4	30-150					3/15/19 0:17	

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-D5 (0-5)

Sampled: 3/11/2019 11:15

Sample ID: 19C0442-13

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	1100	210	mg/Kg dry	20		SW-846 8100 Modified	3/14/19	3/17/19 18:20	RMW
<b>Surrogates</b>		<b>% Recovery</b>	<b>Recovery Limits</b>		<b>Flag/Qual</b>				
2-Fluorobiphenyl		*	40-140		S-01			3/17/19 18:20	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-D5 (0-5)

Sampled: 3/11/2019 11:15

Sample ID: 19C0442-13

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	2.1	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:27	QNW
Arsenic	4.2	2.1	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:27	QNW
Barium	25	2.1	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:27	QNW
Beryllium	0.24	0.21	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:27	QNW
Cadmium	0.65	0.21	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:27	QNW
Chromium	14	0.42	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:27	QNW
Lead	25	0.63	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:27	QNW
Mercury	ND	0.032	mg/Kg dry	1		SW-846 7471B	3/13/19	3/14/19 12:34	TBC
Nickel	10	0.42	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:27	QNW
Selenium	ND	4.2	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:27	QNW
Silver	ND	0.42	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:27	QNW
Thallium	ND	2.1	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:27	QNW
Vanadium	20	0.84	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:27	QNW
Zinc	52	0.84	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:27	QNW

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-D5 (0-5)

Sampled: 3/11/2019 11:15

Sample ID: 19C0442-13

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	79.9		% Wt	1		SM 2540G	3/18/19	3/18/19 15:50	VLH
Ignitability	Absent		present/absent	1		SW-846 1030	3/13/19	3/13/19 16:45	DJM
pH @19°C	8.2		pH Units	1	H-03	SW-846 9045C	3/13/19	3/13/19 10:50	IS
Reactive Cyanide	ND	4.0	mg/Kg	1		SW-846 9014	3/13/19	3/14/19 11:20	DJM
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	3/13/19	3/14/19 10:45	DJM
Specific conductance	17	2.0	µmhos/cm	1		SM21-22 2510B	3/13/19	3/13/19 12:58	KMV



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-D5 (5-10)

Sampled: 3/11/2019 11:20

Sample ID: 19C0442-14

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.076	mg/Kg dry	1	R-05	SW-846 8260C	3/13/19	3/13/19 14:50	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00076	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:50	MFF
Benzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:50	MFF
Bromobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:50	MFF
Bromochloromethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:50	MFF
Bromodichloromethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:50	MFF
Bromoform	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:50	MFF
Bromomethane	ND	0.0076	mg/Kg dry	1	V-34	SW-846 8260C	3/13/19	3/13/19 14:50	MFF
2-Butanone (MEK)	ND	0.030	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:50	MFF
n-Butylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:50	MFF
sec-Butylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:50	MFF
tert-Butylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:50	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00076	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:50	MFF
Carbon Disulfide	ND	0.0046	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:50	MFF
Carbon Tetrachloride	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:50	MFF
Chlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:50	MFF
Chlorodibromomethane	ND	0.00076	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:50	MFF
Chloroethane	ND	0.0076	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:50	MFF
Chloroform	ND	0.0030	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:50	MFF
Chloromethane	ND	0.0076	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:50	MFF
2-Chlorotoluene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:50	MFF
4-Chlorotoluene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:50	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0030	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:50	MFF
1,2-Dibromoethane (EDB)	ND	0.00076	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:50	MFF
Dibromomethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:50	MFF
1,2-Dichlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:50	MFF
1,3-Dichlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:50	MFF
1,4-Dichlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:50	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0076	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:50	MFF
1,1-Dichloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:50	MFF
1,2-Dichloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:50	MFF
1,1-Dichloroethylene	ND	0.0030	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:50	MFF
cis-1,2-Dichloroethylene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:50	MFF
trans-1,2-Dichloroethylene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:50	MFF
1,2-Dichloropropane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:50	MFF
1,3-Dichloropropane	ND	0.00076	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:50	MFF
2,2-Dichloropropane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:50	MFF
1,1-Dichloropropene	ND	0.0030	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:50	MFF
cis-1,3-Dichloropropene	ND	0.00076	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:50	MFF
trans-1,3-Dichloropropene	ND	0.00076	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:50	MFF
Diethyl Ether	ND	0.0076	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:50	MFF
Diisopropyl Ether (DIPE)	ND	0.00076	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:50	MFF
1,4-Dioxane	ND	0.15	mg/Kg dry	1	V-16	SW-846 8260C	3/13/19	3/13/19 14:50	MFF
Ethylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:50	MFF

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-D5 (5-10)

Sampled: 3/11/2019 11:20

Sample ID: 19C0442-14

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:50	MFF
2-Hexanone (MBK)	ND	0.015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:50	MFF
Isopropylbenzene (Cumene)	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:50	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:50	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0030	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:50	MFF
Methylene Chloride	ND	0.0076	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:50	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:50	MFF
Naphthalene	ND	0.0030	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:50	MFF
n-Propylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:50	MFF
Styrene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:50	MFF
1,1,1,2-Tetrachloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:50	MFF
1,1,2,2-Tetrachloroethane	ND	0.00076	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:50	MFF
Tetrachloroethylene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:50	MFF
Tetrahydrofuran	ND	0.0076	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:50	MFF
Toluene	0.0019	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:50	MFF
1,2,3-Trichlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:50	MFF
1,2,4-Trichlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:50	MFF
1,1,1-Trichloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:50	MFF
1,1,2-Trichloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:50	MFF
Trichloroethylene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:50	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0076	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:50	MFF
1,2,3-Trichloropropane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:50	MFF
1,2,4-Trimethylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:50	MFF
1,3,5-Trimethylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:50	MFF
Vinyl Chloride	ND	0.0076	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:50	MFF
m+p Xylene	ND	0.0030	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:50	MFF
o-Xylene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 14:50	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	88.7	70-130	3/13/19 14:50
Toluene-d8	97.4	70-130	3/13/19 14:50
4-Bromofluorobenzene	102	70-130	3/13/19 14:50

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-D5 (5-10)

Sampled: 3/11/2019 11:20

Sample ID: 19C0442-14

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.19	mg/Kg dry	1		SW-846 8270D	3/14/19	3/19/19 11:30	IMR
Acenaphthylene	ND	0.19	mg/Kg dry	1		SW-846 8270D	3/14/19	3/19/19 11:30	IMR
Acetophenone	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/14/19	3/19/19 11:30	IMR
Aniline	ND	0.38	mg/Kg dry	1	V-34	SW-846 8270D	3/14/19	3/19/19 11:30	IMR
Anthracene	ND	0.19	mg/Kg dry	1		SW-846 8270D	3/14/19	3/19/19 11:30	IMR
Benzo(a)anthracene	0.37	0.19	mg/Kg dry	1		SW-846 8270D	3/14/19	3/19/19 11:30	IMR
Benzo(a)pyrene	0.43	0.19	mg/Kg dry	1		SW-846 8270D	3/14/19	3/19/19 11:30	IMR
Benzo(b)fluoranthene	0.53	0.19	mg/Kg dry	1		SW-846 8270D	3/14/19	3/19/19 11:30	IMR
Benzo(g,h,i)perylene	0.28	0.19	mg/Kg dry	1		SW-846 8270D	3/14/19	3/19/19 11:30	IMR
Benzo(k)fluoranthene	0.23	0.19	mg/Kg dry	1		SW-846 8270D	3/14/19	3/19/19 11:30	IMR
Bis(2-chloroethoxy)methane	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/14/19	3/19/19 11:30	IMR
Bis(2-chloroethyl)ether	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/14/19	3/19/19 11:30	IMR
Bis(2-chloroisopropyl)ether	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/14/19	3/19/19 11:30	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/14/19	3/19/19 11:30	IMR
4-Bromophenylphenylether	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/14/19	3/19/19 11:30	IMR
Butylbenzylphthalate	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/14/19	3/19/19 11:30	IMR
4-Chloroaniline	ND	0.73	mg/Kg dry	1	V-34	SW-846 8270D	3/14/19	3/19/19 11:30	IMR
2-Chloronaphthalene	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/14/19	3/19/19 11:30	IMR
2-Chlorophenol	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/14/19	3/19/19 11:30	IMR
Chrysene	0.41	0.19	mg/Kg dry	1		SW-846 8270D	3/14/19	3/19/19 11:30	IMR
Dibenz(a,h)anthracene	ND	0.19	mg/Kg dry	1		SW-846 8270D	3/14/19	3/19/19 11:30	IMR
Dibenzofuran	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/14/19	3/19/19 11:30	IMR
Di-n-butylphthalate	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/14/19	3/19/19 11:30	IMR
1,2-Dichlorobenzene	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/14/19	3/19/19 11:30	IMR
1,3-Dichlorobenzene	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/14/19	3/19/19 11:30	IMR
1,4-Dichlorobenzene	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/14/19	3/19/19 11:30	IMR
3,3-Dichlorobenzidine	ND	0.19	mg/Kg dry	1		SW-846 8270D	3/14/19	3/19/19 11:30	IMR
2,4-Dichlorophenol	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/14/19	3/19/19 11:30	IMR
Diethylphthalate	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/14/19	3/19/19 11:30	IMR
2,4-Dimethylphenol	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/14/19	3/19/19 11:30	IMR
Dimethylphthalate	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/14/19	3/19/19 11:30	IMR
2,4-Dinitrophenol	ND	0.73	mg/Kg dry	1		SW-846 8270D	3/14/19	3/19/19 11:30	IMR
2,4-Dinitrotoluene	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/14/19	3/19/19 11:30	IMR
2,6-Dinitrotoluene	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/14/19	3/19/19 11:30	IMR
Di-n-octylphthalate	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/14/19	3/19/19 11:30	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/14/19	3/19/19 11:30	IMR
Fluoranthene	0.70	0.19	mg/Kg dry	1		SW-846 8270D	3/14/19	3/19/19 11:30	IMR
Fluorene	ND	0.19	mg/Kg dry	1		SW-846 8270D	3/14/19	3/19/19 11:30	IMR
Hexachlorobenzene	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/14/19	3/19/19 11:30	IMR
Hexachlorobutadiene	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/14/19	3/19/19 11:30	IMR
Hexachloroethane	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/14/19	3/19/19 11:30	IMR
Indeno(1,2,3-cd)pyrene	0.29	0.19	mg/Kg dry	1		SW-846 8270D	3/14/19	3/19/19 11:30	IMR
Isophorone	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/14/19	3/19/19 11:30	IMR
2-Methylnaphthalene	ND	0.19	mg/Kg dry	1		SW-846 8270D	3/14/19	3/19/19 11:30	IMR

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-D5 (5-10)

Sampled: 3/11/2019 11:20

Sample ID: 19C0442-14

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/14/19	3/19/19 11:30	IMR
3/4-Methylphenol	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/14/19	3/19/19 11:30	IMR
Naphthalene	ND	0.19	mg/Kg dry	1		SW-846 8270D	3/14/19	3/19/19 11:30	IMR
Nitrobenzene	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/14/19	3/19/19 11:30	IMR
2-Nitrophenol	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/14/19	3/19/19 11:30	IMR
4-Nitrophenol	ND	0.73	mg/Kg dry	1		SW-846 8270D	3/14/19	3/19/19 11:30	IMR
Pentachlorophenol	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/14/19	3/19/19 11:30	IMR
Phenanthrene	0.28	0.19	mg/Kg dry	1		SW-846 8270D	3/14/19	3/19/19 11:30	IMR
Phenol	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/14/19	3/19/19 11:30	IMR
Pyrene	0.75	0.19	mg/Kg dry	1		SW-846 8270D	3/14/19	3/19/19 11:30	IMR
1,2,4-Trichlorobenzene	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/14/19	3/19/19 11:30	IMR
2,4,5-Trichlorophenol	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/14/19	3/19/19 11:30	IMR
2,4,6-Trichlorophenol	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/14/19	3/19/19 11:30	IMR
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2-Fluorophenol		67.0	30-130					3/19/19 11:30	
Phenol-d6		66.7	30-130					3/19/19 11:30	
Nitrobenzene-d5		67.7	30-130					3/19/19 11:30	
2-Fluorobiphenyl		71.6	30-130					3/19/19 11:30	
2,4,6-Tribromophenol		69.9	30-130					3/19/19 11:30	
p-Terphenyl-d14		83.0	30-130					3/19/19 11:30	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-D5 (5-10)

Sampled: 3/11/2019 11:20

Sample ID: 19C0442-14

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	3/13/19	3/15/19 0:35	JMB
Aroclor-1221 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	3/13/19	3/15/19 0:35	JMB
Aroclor-1232 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	3/13/19	3/15/19 0:35	JMB
Aroclor-1242 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	3/13/19	3/15/19 0:35	JMB
Aroclor-1248 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	3/13/19	3/15/19 0:35	JMB
Aroclor-1254 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	3/13/19	3/15/19 0:35	JMB
Aroclor-1260 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	3/13/19	3/15/19 0:35	JMB
Aroclor-1262 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	3/13/19	3/15/19 0:35	JMB
Aroclor-1268 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	3/13/19	3/15/19 0:35	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		92.1	30-150					3/15/19 0:35	
Decachlorobiphenyl [2]		97.0	30-150					3/15/19 0:35	
Tetrachloro-m-xylene [1]		98.9	30-150					3/15/19 0:35	
Tetrachloro-m-xylene [2]		99.9	30-150					3/15/19 0:35	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-D5 (5-10)

Sampled: 3/11/2019 11:20

Sample ID: 19C0442-14

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	510	92	mg/Kg dry	10		SW-846 8100 Modified	3/14/19	3/17/19 18:39	RMW
Surrogates	% Recovery		Recovery Limits	Flag/Qual					
2-Fluorobiphenyl	*		40-140	S-01		3/17/19 18:39			

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-D5 (5-10)

Sampled: 3/11/2019 11:20

Sample ID: 19C0442-14

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.8	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:32	QNW
Arsenic	4.6	1.8	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:32	QNW
Barium	27	1.8	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:32	QNW
Beryllium	0.32	0.18	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:32	QNW
Cadmium	0.34	0.18	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:32	QNW
Chromium	15	0.37	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:32	QNW
Lead	20	0.55	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:32	QNW
Mercury	ND	0.028	mg/Kg dry	1		SW-846 7471B	3/13/19	3/14/19 12:35	TBC
Nickel	13	0.37	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:32	QNW
Selenium	ND	3.7	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:32	QNW
Silver	ND	0.37	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:32	QNW
Thallium	ND	1.8	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:32	QNW
Vanadium	23	0.73	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:32	QNW
Zinc	36	0.73	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:32	QNW

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-D5 (5-10)

Sampled: 3/11/2019 11:20

Sample ID: 19C0442-14

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	89.5		% Wt	1		SM 2540G	3/18/19	3/18/19 15:50	VLH
Ignitability	Absent		present/absent	1		SW-846 1030	3/13/19	3/13/19 16:45	DJM
pH @18.4°C	8.5		pH Units	1	H-03	SW-846 9045C	3/13/19	3/13/19 10:50	IS
Reactive Cyanide	ND	4.0	mg/Kg	1		SW-846 9014	3/13/19	3/14/19 11:20	DJM
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	3/13/19	3/14/19 10:45	DJM
Specific conductance	11	2.0	µmhos/cm	1		SM21-22 2510B	3/13/19	3/13/19 12:58	KMV



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-D4 (0-5)

Sampled: 3/11/2019 12:00

Sample ID: 19C0442-15

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.060	mg/Kg dry	1	R-05	SW-846 8260C	3/13/19	3/13/19 15:18	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00060	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:18	MFF
Benzene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:18	MFF
Bromobenzene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:18	MFF
Bromochloromethane	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:18	MFF
Bromodichloromethane	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:18	MFF
Bromoform	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:18	MFF
Bromomethane	ND	0.0060	mg/Kg dry	1	V-34	SW-846 8260C	3/13/19	3/13/19 15:18	MFF
2-Butanone (MEK)	ND	0.024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:18	MFF
n-Butylbenzene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:18	MFF
sec-Butylbenzene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:18	MFF
tert-Butylbenzene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:18	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00060	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:18	MFF
Carbon Disulfide	ND	0.0036	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:18	MFF
Carbon Tetrachloride	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:18	MFF
Chlorobenzene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:18	MFF
Chlorodibromomethane	ND	0.00060	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:18	MFF
Chloroethane	ND	0.0060	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:18	MFF
Chloroform	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:18	MFF
Chloromethane	ND	0.0060	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:18	MFF
2-Chlorotoluene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:18	MFF
4-Chlorotoluene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:18	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:18	MFF
1,2-Dibromoethane (EDB)	ND	0.00060	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:18	MFF
Dibromomethane	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:18	MFF
1,2-Dichlorobenzene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:18	MFF
1,3-Dichlorobenzene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:18	MFF
1,4-Dichlorobenzene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:18	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0060	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:18	MFF
1,1-Dichloroethane	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:18	MFF
1,2-Dichloroethane	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:18	MFF
1,1-Dichloroethylene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:18	MFF
cis-1,2-Dichloroethylene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:18	MFF
trans-1,2-Dichloroethylene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:18	MFF
1,2-Dichloropropane	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:18	MFF
1,3-Dichloropropane	ND	0.00060	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:18	MFF
2,2-Dichloropropane	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:18	MFF
1,1-Dichloropropene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:18	MFF
cis-1,3-Dichloropropene	ND	0.00060	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:18	MFF
trans-1,3-Dichloropropene	ND	0.00060	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:18	MFF
Diethyl Ether	ND	0.0060	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:18	MFF
Diisopropyl Ether (DIPE)	ND	0.00060	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:18	MFF
1,4-Dioxane	ND	0.12	mg/Kg dry	1	V-16	SW-846 8260C	3/13/19	3/13/19 15:18	MFF
Ethylbenzene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:18	MFF

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-D4 (0-5)

Sampled: 3/11/2019 12:00

Sample ID: 19C0442-15

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:18	MFF
2-Hexanone (MBK)	ND	0.012	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:18	MFF
Isopropylbenzene (Cumene)	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:18	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:18	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:18	MFF
Methylene Chloride	ND	0.0060	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:18	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.012	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:18	MFF
Naphthalene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:18	MFF
n-Propylbenzene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:18	MFF
Styrene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:18	MFF
1,1,1,2-Tetrachloroethane	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:18	MFF
1,1,2,2-Tetrachloroethane	ND	0.00060	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:18	MFF
Tetrachloroethylene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:18	MFF
Tetrahydrofuran	ND	0.0060	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:18	MFF
Toluene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:18	MFF
1,2,3-Trichlorobenzene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:18	MFF
1,2,4-Trichlorobenzene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:18	MFF
1,1,1-Trichloroethane	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:18	MFF
1,1,2-Trichloroethane	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:18	MFF
Trichloroethylene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:18	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0060	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:18	MFF
1,2,3-Trichloropropane	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:18	MFF
1,2,4-Trimethylbenzene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:18	MFF
1,3,5-Trimethylbenzene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:18	MFF
Vinyl Chloride	ND	0.0060	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:18	MFF
m+p Xylene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:18	MFF
o-Xylene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:18	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	89.5	70-130	
Toluene-d8	98.6	70-130	
4-Bromofluorobenzene	98.8	70-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-D4 (0-5)

Sampled: 3/11/2019 12:00

Sample ID: 19C0442-15

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatle Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.73	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 15:06	IMR
Acenaphthylene	ND	0.73	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 15:06	IMR
Acetophenone	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 15:06	IMR
Aniline	ND	1.5	mg/Kg dry	4	V-34	SW-846 8270D	3/14/19	3/18/19 15:06	IMR
Anthracene	0.89	0.73	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 15:06	IMR
Benzo(a)anthracene	2.9	0.73	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 15:06	IMR
Benzo(a)pyrene	2.6	0.73	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 15:06	IMR
Benzo(b)fluoranthene	3.0	0.73	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 15:06	IMR
Benzo(g,h,i)perylene	1.5	0.73	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 15:06	IMR
Benzo(k)fluoranthene	1.3	0.73	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 15:06	IMR
Bis(2-chloroethoxy)methane	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 15:06	IMR
Bis(2-chloroethyl)ether	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 15:06	IMR
Bis(2-chloroisopropyl)ether	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 15:06	IMR
Bis(2-Ethylhexyl)phthalate	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 15:06	IMR
4-Bromophenylphenylether	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 15:06	IMR
Butylbenzylphthalate	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 15:06	IMR
4-Chloroaniline	ND	2.8	mg/Kg dry	4	V-34	SW-846 8270D	3/14/19	3/18/19 15:06	IMR
2-Chloronaphthalene	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 15:06	IMR
2-Chlorophenol	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 15:06	IMR
Chrysene	2.6	0.73	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 15:06	IMR
Dibenz(a,h)anthracene	ND	0.73	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 15:06	IMR
Dibenzofuran	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 15:06	IMR
Di-n-butylphthalate	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 15:06	IMR
1,2-Dichlorobenzene	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 15:06	IMR
1,3-Dichlorobenzene	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 15:06	IMR
1,4-Dichlorobenzene	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 15:06	IMR
3,3-Dichlorobenzidine	ND	0.73	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 15:06	IMR
2,4-Dichlorophenol	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 15:06	IMR
Diethylphthalate	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 15:06	IMR
2,4-Dimethylphenol	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 15:06	IMR
Dimethylphthalate	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 15:06	IMR
2,4-Dinitrophenol	ND	2.8	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 15:06	IMR
2,4-Dinitrotoluene	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 15:06	IMR
2,6-Dinitrotoluene	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 15:06	IMR
Di-n-octylphthalate	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 15:06	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 15:06	IMR
Fluoranthene	6.1	0.73	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 15:06	IMR
Fluorene	ND	0.73	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 15:06	IMR
Hexachlorobenzene	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 15:06	IMR
Hexachlorobutadiene	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 15:06	IMR
Hexachloroethane	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 15:06	IMR
Indeno(1,2,3-cd)pyrene	1.6	0.73	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 15:06	IMR
Isophorone	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 15:06	IMR
2-Methylnaphthalene	ND	0.73	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 15:06	IMR

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-D4 (0-5)

Sampled: 3/11/2019 12:00

Sample ID: 19C0442-15

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 15:06	IMR
3/4-Methylphenol	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 15:06	IMR
Naphthalene	ND	0.73	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 15:06	IMR
Nitrobenzene	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 15:06	IMR
2-Nitrophenol	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 15:06	IMR
4-Nitrophenol	ND	2.8	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 15:06	IMR
Pentachlorophenol	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 15:06	IMR
Phenanthrene	3.6	0.73	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 15:06	IMR
Phenol	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 15:06	IMR
Pyrene	5.7	0.73	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 15:06	IMR
1,2,4-Trichlorobenzene	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 15:06	IMR
2,4,5-Trichlorophenol	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 15:06	IMR
2,4,6-Trichlorophenol	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/18/19 15:06	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	69.5	30-130	
Phenol-d6	66.8	30-130	
Nitrobenzene-d5	68.0	30-130	
2-Fluorobiphenyl	68.4	30-130	
2,4,6-Tribromophenol	65.1	30-130	
p-Terphenyl-d14	78.3	30-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-D4 (0-5)

Sampled: 3/11/2019 12:00

Sample ID: 19C0442-15

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.087	mg/Kg dry	4		SW-846 8082A	3/13/19	3/15/19 0:53	JMB
Aroclor-1221 [1]	ND	0.087	mg/Kg dry	4		SW-846 8082A	3/13/19	3/15/19 0:53	JMB
Aroclor-1232 [1]	ND	0.087	mg/Kg dry	4		SW-846 8082A	3/13/19	3/15/19 0:53	JMB
Aroclor-1242 [1]	ND	0.087	mg/Kg dry	4		SW-846 8082A	3/13/19	3/15/19 0:53	JMB
Aroclor-1248 [1]	ND	0.087	mg/Kg dry	4		SW-846 8082A	3/13/19	3/15/19 0:53	JMB
Aroclor-1254 [1]	ND	0.087	mg/Kg dry	4		SW-846 8082A	3/13/19	3/15/19 0:53	JMB
Aroclor-1260 [1]	ND	0.087	mg/Kg dry	4		SW-846 8082A	3/13/19	3/15/19 0:53	JMB
Aroclor-1262 [1]	ND	0.087	mg/Kg dry	4		SW-846 8082A	3/13/19	3/15/19 0:53	JMB
Aroclor-1268 [1]	ND	0.087	mg/Kg dry	4		SW-846 8082A	3/13/19	3/15/19 0:53	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		88.4	30-150					3/15/19 0:53	
Decachlorobiphenyl [2]		95.8	30-150					3/15/19 0:53	
Tetrachloro-m-xylene [1]		98.5	30-150					3/15/19 0:53	
Tetrachloro-m-xylene [2]		95.6	30-150					3/15/19 0:53	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-D4 (0-5)

Sampled: 3/11/2019 12:00

Sample ID: 19C0442-15

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	1000	180	mg/Kg dry	20		SW-846 8100 Modified	3/14/19	3/17/19 23:20	RMW
<b>Surrogates</b>		<b>% Recovery</b>	<b>Recovery Limits</b>		<b>Flag/Qual</b>				
2-Fluorobiphenyl		*	40-140		S-01			3/17/19 23:20	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-D4 (0-5)

Sampled: 3/11/2019 12:00

Sample ID: 19C0442-15

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.8	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:48	QNW
Arsenic	3.4	1.8	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:48	QNW
Barium	37	1.8	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:48	QNW
Beryllium	0.28	0.18	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:48	QNW
Cadmium	0.31	0.18	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:48	QNW
Chromium	14	0.36	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:48	QNW
Lead	56	0.54	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:48	QNW
Mercury	0.28	0.026	mg/Kg dry	1		SW-846 7471B	3/13/19	3/14/19 12:37	TBC
Nickel	12	0.36	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:48	QNW
Selenium	ND	3.6	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:48	QNW
Silver	ND	0.36	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:48	QNW
Thallium	ND	1.8	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:48	QNW
Vanadium	26	0.73	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:48	QNW
Zinc	54	0.73	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:48	QNW

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-D4 (0-5)

Sampled: 3/11/2019 12:00

Sample ID: 19C0442-15

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	91.7		% Wt	1		SM 2540G	3/18/19	3/18/19 15:51	VLH
Ignitability	Absent		present/absent	1		SW-846 1030	3/13/19	3/13/19 16:45	DJM
pH @18.5°C	8.2		pH Units	1	H-03	SW-846 9045C	3/13/19	3/13/19 10:50	IS
Reactive Cyanide	ND	4.0	mg/Kg	1		SW-846 9014	3/13/19	3/14/19 11:20	DJM
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	3/13/19	3/14/19 10:45	DJM
Specific conductance	24	2.0	µmhos/cm	1		SM21-22 2510B	3/13/19	3/13/19 12:58	KMV



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-D4 (5-10)

Sampled: 3/11/2019 12:10

Sample ID: 19C0442-16

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.084	mg/Kg dry	1	R-05	SW-846 8260C	3/13/19	3/13/19 15:45	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00084	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:45	MFF
Benzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:45	MFF
Bromobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:45	MFF
Bromochloromethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:45	MFF
Bromodichloromethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:45	MFF
Bromoform	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:45	MFF
Bromomethane	ND	0.0084	mg/Kg dry	1	V-34	SW-846 8260C	3/13/19	3/13/19 15:45	MFF
2-Butanone (MEK)	ND	0.034	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:45	MFF
n-Butylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:45	MFF
sec-Butylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:45	MFF
tert-Butylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:45	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00084	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:45	MFF
Carbon Disulfide	ND	0.0050	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:45	MFF
Carbon Tetrachloride	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:45	MFF
Chlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:45	MFF
Chlorodibromomethane	ND	0.00084	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:45	MFF
Chloroethane	ND	0.0084	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:45	MFF
Chloroform	ND	0.0034	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:45	MFF
Chloromethane	ND	0.0084	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:45	MFF
2-Chlorotoluene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:45	MFF
4-Chlorotoluene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:45	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0034	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:45	MFF
1,2-Dibromoethane (EDB)	ND	0.00084	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:45	MFF
Dibromomethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:45	MFF
1,2-Dichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:45	MFF
1,3-Dichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:45	MFF
1,4-Dichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:45	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0084	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:45	MFF
1,1-Dichloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:45	MFF
1,2-Dichloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:45	MFF
1,1-Dichloroethylene	ND	0.0034	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:45	MFF
cis-1,2-Dichloroethylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:45	MFF
trans-1,2-Dichloroethylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:45	MFF
1,2-Dichloropropane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:45	MFF
1,3-Dichloropropane	ND	0.00084	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:45	MFF
2,2-Dichloropropane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:45	MFF
1,1-Dichloropropene	ND	0.0034	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:45	MFF
cis-1,3-Dichloropropene	ND	0.00084	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:45	MFF
trans-1,3-Dichloropropene	ND	0.00084	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:45	MFF
Diethyl Ether	ND	0.0084	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:45	MFF
Diisopropyl Ether (DIPE)	ND	0.00084	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:45	MFF
1,4-Dioxane	ND	0.17	mg/Kg dry	1	V-16	SW-846 8260C	3/13/19	3/13/19 15:45	MFF
Ethylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:45	MFF

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-D4 (5-10)

Sampled: 3/11/2019 12:10

Sample ID: 19C0442-16

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:45	MFF
2-Hexanone (MBK)	ND	0.017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:45	MFF
Isopropylbenzene (Cumene)	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:45	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:45	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0034	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:45	MFF
Methylene Chloride	ND	0.0084	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:45	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:45	MFF
Naphthalene	ND	0.0034	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:45	MFF
n-Propylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:45	MFF
Styrene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:45	MFF
1,1,1,2-Tetrachloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:45	MFF
1,1,2,2-Tetrachloroethane	ND	0.00084	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:45	MFF
Tetrachloroethylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:45	MFF
Tetrahydrofuran	ND	0.0084	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:45	MFF
Toluene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:45	MFF
1,2,3-Trichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:45	MFF
1,2,4-Trichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:45	MFF
1,1,1-Trichloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:45	MFF
1,1,2-Trichloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:45	MFF
Trichloroethylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:45	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0084	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:45	MFF
1,2,3-Trichloropropane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:45	MFF
1,2,4-Trimethylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:45	MFF
1,3,5-Trimethylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:45	MFF
Vinyl Chloride	ND	0.0084	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:45	MFF
m+p Xylene	ND	0.0034	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:45	MFF
o-Xylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 15:45	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	87.6	70-130	3/13/19 15:45
Toluene-d8	97.2	70-130	3/13/19 15:45
4-Bromofluorobenzene	101	70-130	3/13/19 15:45

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-D4 (5-10)

Sampled: 3/11/2019 12:10

Sample ID: 19C0442-16

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatiles Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.92	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 15:35	IMR
Acenaphthylene	ND	0.92	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 15:35	IMR
Acetophenone	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 15:35	IMR
Aniline	ND	1.8	mg/Kg dry	5	V-34	SW-846 8270D	3/14/19	3/18/19 15:35	IMR
Anthracene	ND	0.92	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 15:35	IMR
Benzo(a)anthracene	ND	0.92	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 15:35	IMR
Benzo(a)pyrene	ND	0.92	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 15:35	IMR
Benzo(b)fluoranthene	ND	0.92	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 15:35	IMR
Benzo(g,h,i)perylene	ND	0.92	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 15:35	IMR
Benzo(k)fluoranthene	ND	0.92	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 15:35	IMR
Bis(2-chloroethoxy)methane	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 15:35	IMR
Bis(2-chloroethyl)ether	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 15:35	IMR
Bis(2-chloroisopropyl)ether	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 15:35	IMR
Bis(2-Ethylhexyl)phthalate	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 15:35	IMR
4-Bromophenylphenylether	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 15:35	IMR
Butylbenzylphthalate	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 15:35	IMR
4-Chloroaniline	ND	3.6	mg/Kg dry	5	V-34	SW-846 8270D	3/14/19	3/18/19 15:35	IMR
2-Chloronaphthalene	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 15:35	IMR
2-Chlorophenol	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 15:35	IMR
Chrysene	ND	0.92	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 15:35	IMR
Dibenz(a,h)anthracene	ND	0.92	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 15:35	IMR
Dibenzofuran	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 15:35	IMR
Di-n-butylphthalate	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 15:35	IMR
1,2-Dichlorobenzene	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 15:35	IMR
1,3-Dichlorobenzene	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 15:35	IMR
1,4-Dichlorobenzene	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 15:35	IMR
3,3-Dichlorobenzidine	ND	0.92	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 15:35	IMR
2,4-Dichlorophenol	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 15:35	IMR
Diethylphthalate	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 15:35	IMR
2,4-Dimethylphenol	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 15:35	IMR
Dimethylphthalate	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 15:35	IMR
2,4-Dinitrophenol	ND	3.6	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 15:35	IMR
2,4-Dinitrotoluene	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 15:35	IMR
2,6-Dinitrotoluene	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 15:35	IMR
Di-n-octylphthalate	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 15:35	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 15:35	IMR
Fluoranthene	0.95	0.92	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 15:35	IMR
Fluorene	ND	0.92	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 15:35	IMR
Hexachlorobenzene	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 15:35	IMR
Hexachlorobutadiene	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 15:35	IMR
Hexachloroethane	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 15:35	IMR
Indeno(1,2,3-cd)pyrene	ND	0.92	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 15:35	IMR
Isophorone	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 15:35	IMR
2-Methylnaphthalene	ND	0.92	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 15:35	IMR

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-D4 (5-10)

Sampled: 3/11/2019 12:10

Sample ID: 19C0442-16

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 15:35	IMR
3/4-Methylphenol	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 15:35	IMR
Naphthalene	ND	0.92	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 15:35	IMR
Nitrobenzene	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 15:35	IMR
2-Nitrophenol	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 15:35	IMR
4-Nitrophenol	ND	3.6	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 15:35	IMR
Pentachlorophenol	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 15:35	IMR
Phenanthrene	ND	0.92	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 15:35	IMR
Phenol	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 15:35	IMR
Pyrene	1.1	0.92	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 15:35	IMR
1,2,4-Trichlorobenzene	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 15:35	IMR
2,4,5-Trichlorophenol	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 15:35	IMR
2,4,6-Trichlorophenol	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 15:35	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	71.0	30-130	
Phenol-d6	71.0	30-130	
Nitrobenzene-d5	69.7	30-130	
2-Fluorobiphenyl	72.9	30-130	
2,4,6-Tribromophenol	75.0	30-130	
p-Terphenyl-d14	81.4	30-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-D4 (5-10)

Sampled: 3/11/2019 12:10

Sample ID: 19C0442-16

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.088	mg/Kg dry	4		SW-846 8082A	3/13/19	3/15/19 1:10	JMB
Aroclor-1221 [1]	ND	0.088	mg/Kg dry	4		SW-846 8082A	3/13/19	3/15/19 1:10	JMB
Aroclor-1232 [1]	ND	0.088	mg/Kg dry	4		SW-846 8082A	3/13/19	3/15/19 1:10	JMB
Aroclor-1242 [1]	ND	0.088	mg/Kg dry	4		SW-846 8082A	3/13/19	3/15/19 1:10	JMB
Aroclor-1248 [1]	ND	0.088	mg/Kg dry	4		SW-846 8082A	3/13/19	3/15/19 1:10	JMB
Aroclor-1254 [1]	ND	0.088	mg/Kg dry	4		SW-846 8082A	3/13/19	3/15/19 1:10	JMB
Aroclor-1260 [1]	ND	0.088	mg/Kg dry	4		SW-846 8082A	3/13/19	3/15/19 1:10	JMB
Aroclor-1262 [1]	ND	0.088	mg/Kg dry	4		SW-846 8082A	3/13/19	3/15/19 1:10	JMB
Aroclor-1268 [1]	ND	0.088	mg/Kg dry	4		SW-846 8082A	3/13/19	3/15/19 1:10	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		89.8	30-150					3/15/19 1:10	
Decachlorobiphenyl [2]		91.2	30-150					3/15/19 1:10	
Tetrachloro-m-xylene [1]		92.4	30-150					3/15/19 1:10	
Tetrachloro-m-xylene [2]		91.9	30-150					3/15/19 1:10	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-D4 (5-10)

Sampled: 3/11/2019 12:10

Sample ID: 19C0442-16

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	960	180	mg/Kg dry	20		SW-846 8100 Modified	3/14/19	3/17/19 23:40	RMW
Surrogates	% Recovery		Recovery Limits	Flag/Qual					
2-Fluorobiphenyl	*		40-140	S-01		3/17/19 23:40			

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-D4 (5-10)

Sampled: 3/11/2019 12:10

Sample ID: 19C0442-16

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.8	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:53	QNW
Arsenic	3.7	1.8	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:53	QNW
Barium	27	1.8	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:53	QNW
Beryllium	0.27	0.18	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:53	QNW
Cadmium	0.27	0.18	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:53	QNW
Chromium	15	0.37	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:53	QNW
Lead	25	0.55	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:53	QNW
Mercury	ND	0.027	mg/Kg dry	1		SW-846 7471B	3/13/19	3/14/19 12:39	TBC
Nickel	13	0.37	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:53	QNW
Selenium	ND	3.7	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:53	QNW
Silver	ND	0.37	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:53	QNW
Thallium	ND	1.8	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:53	QNW
Vanadium	29	0.74	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:53	QNW
Zinc	37	0.74	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:53	QNW

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-D4 (5-10)

Sampled: 3/11/2019 12:10

Sample ID: 19C0442-16

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	90.5		% Wt	1		SM 2540G	3/18/19	3/18/19 15:51	VLH
Ignitability	Absent		present/absent	1		SW-846 1030	3/13/19	3/13/19 16:45	DJM
pH @18.7°C	7.8		pH Units	1	H-03	SW-846 9045C	3/13/19	3/13/19 10:50	IS
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	3/13/19	3/14/19 11:20	DJM
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	3/13/19	3/14/19 10:45	DJM
Specific conductance	6.2	2.0	µmhos/cm	1		SM21-22 2510B	3/13/19	3/13/19 12:58	KMV



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-C4 (0-5)

Sampled: 3/11/2019 12:30

Sample ID: 19C0442-17

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.081	mg/Kg dry	1	R-05	SW-846 8260C	3/13/19	3/13/19 16:12	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00081	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 16:12	MFF
Benzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 16:12	MFF
Bromobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 16:12	MFF
Bromochloromethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 16:12	MFF
Bromodichloromethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 16:12	MFF
Bromoform	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 16:12	MFF
Bromomethane	ND	0.0081	mg/Kg dry	1	V-34	SW-846 8260C	3/13/19	3/13/19 16:12	MFF
2-Butanone (MEK)	ND	0.033	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 16:12	MFF
n-Butylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 16:12	MFF
sec-Butylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 16:12	MFF
tert-Butylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 16:12	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00081	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 16:12	MFF
Carbon Disulfide	ND	0.0049	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 16:12	MFF
Carbon Tetrachloride	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 16:12	MFF
Chlorobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 16:12	MFF
Chlorodibromomethane	ND	0.00081	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 16:12	MFF
Chloroethane	ND	0.0081	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 16:12	MFF
Chloroform	ND	0.0033	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 16:12	MFF
Chloromethane	ND	0.0081	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 16:12	MFF
2-Chlorotoluene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 16:12	MFF
4-Chlorotoluene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 16:12	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0033	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 16:12	MFF
1,2-Dibromoethane (EDB)	ND	0.00081	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 16:12	MFF
Dibromomethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 16:12	MFF
1,2-Dichlorobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 16:12	MFF
1,3-Dichlorobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 16:12	MFF
1,4-Dichlorobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 16:12	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0081	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 16:12	MFF
1,1-Dichloroethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 16:12	MFF
1,2-Dichloroethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 16:12	MFF
1,1-Dichloroethylene	ND	0.0033	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 16:12	MFF
cis-1,2-Dichloroethylene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 16:12	MFF
trans-1,2-Dichloroethylene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 16:12	MFF
1,2-Dichloropropane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 16:12	MFF
1,3-Dichloropropane	ND	0.00081	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 16:12	MFF
2,2-Dichloropropane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 16:12	MFF
1,1-Dichloropropene	ND	0.0033	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 16:12	MFF
cis-1,3-Dichloropropene	ND	0.00081	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 16:12	MFF
trans-1,3-Dichloropropene	ND	0.00081	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 16:12	MFF
Diethyl Ether	ND	0.0081	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 16:12	MFF
Diisopropyl Ether (DIPE)	ND	0.00081	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 16:12	MFF
1,4-Dioxane	ND	0.16	mg/Kg dry	1	V-16	SW-846 8260C	3/13/19	3/13/19 16:12	MFF
Ethylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 16:12	MFF

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-C4 (0-5)

Sampled: 3/11/2019 12:30

Sample ID: 19C0442-17

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 16:12	MFF
2-Hexanone (MBK)	ND	0.016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 16:12	MFF
Isopropylbenzene (Cumene)	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 16:12	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 16:12	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0033	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 16:12	MFF
Methylene Chloride	ND	0.0081	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 16:12	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 16:12	MFF
Naphthalene	ND	0.0033	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 16:12	MFF
n-Propylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 16:12	MFF
Styrene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 16:12	MFF
1,1,1,2-Tetrachloroethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 16:12	MFF
1,1,2,2-Tetrachloroethane	ND	0.00081	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 16:12	MFF
Tetrachloroethylene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 16:12	MFF
Tetrahydrofuran	ND	0.0081	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 16:12	MFF
Toluene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 16:12	MFF
1,2,3-Trichlorobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 16:12	MFF
1,2,4-Trichlorobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 16:12	MFF
1,1,1-Trichloroethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 16:12	MFF
1,1,2-Trichloroethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 16:12	MFF
Trichloroethylene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 16:12	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0081	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 16:12	MFF
1,2,3-Trichloropropane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 16:12	MFF
1,2,4-Trimethylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 16:12	MFF
1,3,5-Trimethylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 16:12	MFF
Vinyl Chloride	ND	0.0081	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 16:12	MFF
m+p Xylene	ND	0.0033	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 16:12	MFF
o-Xylene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 16:12	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	86.9	70-130	
Toluene-d8	97.8	70-130	
4-Bromofluorobenzene	101	70-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-C4 (0-5)

Sampled: 3/11/2019 12:30

Sample ID: 19C0442-17

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatle Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.38	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:03	IMR
Acenaphthylene	ND	0.38	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:03	IMR
Acetophenone	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:03	IMR
Aniline	ND	0.76	mg/Kg dry	2	V-34	SW-846 8270D	3/14/19	3/18/19 16:03	IMR
Anthracene	ND	0.38	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:03	IMR
Benzo(a)anthracene	0.65	0.38	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:03	IMR
Benzo(a)pyrene	0.73	0.38	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:03	IMR
Benzo(b)fluoranthene	0.88	0.38	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:03	IMR
Benzo(g,h,i)perylene	0.56	0.38	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:03	IMR
Benzo(k)fluoranthene	ND	0.38	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:03	IMR
Bis(2-chloroethoxy)methane	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:03	IMR
Bis(2-chloroethyl)ether	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:03	IMR
Bis(2-chloroisopropyl)ether	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:03	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:03	IMR
4-Bromophenylphenylether	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:03	IMR
Butylbenzylphthalate	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:03	IMR
4-Chloroaniline	ND	1.5	mg/Kg dry	2	V-34	SW-846 8270D	3/14/19	3/18/19 16:03	IMR
2-Chloronaphthalene	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:03	IMR
2-Chlorophenol	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:03	IMR
Chrysene	0.71	0.38	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:03	IMR
Dibenz(a,h)anthracene	ND	0.38	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:03	IMR
Dibenzofuran	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:03	IMR
Di-n-butylphthalate	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:03	IMR
1,2-Dichlorobenzene	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:03	IMR
1,3-Dichlorobenzene	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:03	IMR
1,4-Dichlorobenzene	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:03	IMR
3,3-Dichlorobenzidine	ND	0.38	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:03	IMR
2,4-Dichlorophenol	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:03	IMR
Diethylphthalate	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:03	IMR
2,4-Dimethylphenol	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:03	IMR
Dimethylphthalate	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:03	IMR
2,4-Dinitrophenol	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:03	IMR
2,4-Dinitrotoluene	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:03	IMR
2,6-Dinitrotoluene	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:03	IMR
Di-n-octylphthalate	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:03	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:03	IMR
Fluoranthene	1.2	0.38	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:03	IMR
Fluorene	ND	0.38	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:03	IMR
Hexachlorobenzene	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:03	IMR
Hexachlorobutadiene	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:03	IMR
Hexachloroethane	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:03	IMR
Indeno(1,2,3-cd)pyrene	0.53	0.38	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:03	IMR
Isophorone	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:03	IMR
2-Methylnaphthalene	ND	0.38	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:03	IMR

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-C4 (0-5)

Sampled: 3/11/2019 12:30

Sample ID: 19C0442-17

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:03	IMR
3/4-Methylphenol	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:03	IMR
Naphthalene	ND	0.38	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:03	IMR
Nitrobenzene	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:03	IMR
2-Nitrophenol	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:03	IMR
4-Nitrophenol	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:03	IMR
Pentachlorophenol	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:03	IMR
Phenanthrene	0.62	0.38	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:03	IMR
Phenol	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:03	IMR
Pyrene	1.3	0.38	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:03	IMR
1,2,4-Trichlorobenzene	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:03	IMR
2,4,5-Trichlorophenol	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:03	IMR
2,4,6-Trichlorophenol	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:03	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	54.6	30-130	
Phenol-d6	54.3	30-130	
Nitrobenzene-d5	54.2	30-130	
2-Fluorobiphenyl	55.5	30-130	
2,4,6-Tribromophenol	58.1	30-130	
p-Terphenyl-d14	61.5	30-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-C4 (0-5)

Sampled: 3/11/2019 12:30

Sample ID: 19C0442-17

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.091	mg/Kg dry	4		SW-846 8082A	3/13/19	3/15/19 1:28	JMB
Aroclor-1221 [1]	ND	0.091	mg/Kg dry	4		SW-846 8082A	3/13/19	3/15/19 1:28	JMB
Aroclor-1232 [1]	ND	0.091	mg/Kg dry	4		SW-846 8082A	3/13/19	3/15/19 1:28	JMB
Aroclor-1242 [1]	ND	0.091	mg/Kg dry	4		SW-846 8082A	3/13/19	3/15/19 1:28	JMB
Aroclor-1248 [1]	ND	0.091	mg/Kg dry	4		SW-846 8082A	3/13/19	3/15/19 1:28	JMB
Aroclor-1254 [1]	ND	0.091	mg/Kg dry	4		SW-846 8082A	3/13/19	3/15/19 1:28	JMB
Aroclor-1260 [1]	ND	0.091	mg/Kg dry	4		SW-846 8082A	3/13/19	3/15/19 1:28	JMB
Aroclor-1262 [1]	ND	0.091	mg/Kg dry	4		SW-846 8082A	3/13/19	3/15/19 1:28	JMB
Aroclor-1268 [1]	ND	0.091	mg/Kg dry	4		SW-846 8082A	3/13/19	3/15/19 1:28	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		92.6	30-150					3/15/19 1:28	
Decachlorobiphenyl [2]		95.0	30-150					3/15/19 1:28	
Tetrachloro-m-xylene [1]		101	30-150					3/15/19 1:28	
Tetrachloro-m-xylene [2]		100	30-150					3/15/19 1:28	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-C4 (0-5)

Sampled: 3/11/2019 12:30

Sample ID: 19C0442-17

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	700	190	mg/Kg dry	20		SW-846 8100 Modified	3/14/19	3/18/19 0:00	RMW
<b>Surrogates</b>		<b>% Recovery</b>	<b>Recovery Limits</b>		<b>Flag/Qual</b>				
2-Fluorobiphenyl		*	40-140		S-01			3/18/19 0:00	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-C4 (0-5)

Sampled: 3/11/2019 12:30

Sample ID: 19C0442-17

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.8	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:58	QNW
Arsenic	7.7	1.8	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:58	QNW
Barium	32	1.8	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:58	QNW
Beryllium	0.25	0.18	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:58	QNW
Cadmium	0.50	0.18	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:58	QNW
Chromium	12	0.37	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:58	QNW
Lead	79	0.55	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:58	QNW
Mercury	0.049	0.029	mg/Kg dry	1		SW-846 7471B	3/13/19	3/14/19 12:40	TBC
Nickel	9.2	0.37	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:58	QNW
Selenium	ND	3.7	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:58	QNW
Silver	ND	0.37	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:58	QNW
Thallium	ND	1.8	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:58	QNW
Vanadium	16	0.74	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:58	QNW
Zinc	48	0.74	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 14:58	QNW

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-C4 (0-5)

Sampled: 3/11/2019 12:30

Sample ID: 19C0442-17

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	88.2		% Wt	1		SM 2540G	3/18/19	3/18/19 15:51	VLH
Ignitability	Absent		present/absent	1		SW-846 1030	3/13/19	3/13/19 16:45	DJM
pH @18.4°C	8.0		pH Units	1	H-03	SW-846 9045C	3/13/19	3/13/19 10:50	IS
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	3/13/19	3/14/19 11:20	DJM
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	3/13/19	3/14/19 10:45	DJM
Specific conductance	9.1	2.0	µmhos/cm	1		SM21-22 2510B	3/13/19	3/13/19 12:58	KMV



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-C4 (5-10)

Sampled: 3/11/2019 12:35

Sample ID: 19C0442-18

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.12	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:19	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:19	MFF
Benzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:19	MFF
Bromobenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:19	MFF
Bromochloromethane	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:19	MFF
Bromodichloromethane	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:19	MFF
Bromoform	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:19	MFF
Bromomethane	ND	0.012	mg/Kg dry	1	V-34	SW-846 8260C	3/13/19	3/13/19 20:19	MFF
2-Butanone (MEK)	ND	0.048	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:19	MFF
n-Butylbenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:19	MFF
sec-Butylbenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:19	MFF
tert-Butylbenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:19	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:19	MFF
Carbon Disulfide	ND	0.0072	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:19	MFF
Carbon Tetrachloride	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:19	MFF
Chlorobenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:19	MFF
Chlorodibromomethane	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:19	MFF
Chloroethane	ND	0.012	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:19	MFF
Chloroform	ND	0.0048	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:19	MFF
Chloromethane	ND	0.012	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:19	MFF
2-Chlorotoluene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:19	MFF
4-Chlorotoluene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:19	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0048	mg/Kg dry	1	V-05	SW-846 8260C	3/13/19	3/13/19 20:19	MFF
1,2-Dibromoethane (EDB)	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:19	MFF
Dibromomethane	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:19	MFF
1,2-Dichlorobenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:19	MFF
1,3-Dichlorobenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:19	MFF
1,4-Dichlorobenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:19	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.012	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:19	MFF
1,1-Dichloroethane	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:19	MFF
1,2-Dichloroethane	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:19	MFF
1,1-Dichloroethylene	ND	0.0048	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:19	MFF
cis-1,2-Dichloroethylene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:19	MFF
trans-1,2-Dichloroethylene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:19	MFF
1,2-Dichloropropane	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:19	MFF
1,3-Dichloropropane	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:19	MFF
2,2-Dichloropropane	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:19	MFF
1,1-Dichloropropene	ND	0.0048	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:19	MFF
cis-1,3-Dichloropropene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:19	MFF
trans-1,3-Dichloropropene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:19	MFF
Diethyl Ether	ND	0.012	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:19	MFF
Diisopropyl Ether (DIPE)	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:19	MFF
1,4-Dioxane	ND	0.24	mg/Kg dry	1	V-16	SW-846 8260C	3/13/19	3/13/19 20:19	MFF
Ethylbenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:19	MFF

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-C4 (5-10)

Sampled: 3/11/2019 12:35

Sample ID: 19C0442-18

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:19	MFF
2-Hexanone (MBK)	ND	0.024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:19	MFF
Isopropylbenzene (Cumene)	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:19	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:19	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0048	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:19	MFF
Methylene Chloride	ND	0.012	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:19	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:19	MFF
Naphthalene	ND	0.0048	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:19	MFF
n-Propylbenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:19	MFF
Styrene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:19	MFF
1,1,1,2-Tetrachloroethane	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:19	MFF
1,1,2,2-Tetrachloroethane	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:19	MFF
Tetrachloroethylene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:19	MFF
Tetrahydrofuran	ND	0.012	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:19	MFF
Toluene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:19	MFF
1,2,3-Trichlorobenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:19	MFF
1,2,4-Trichlorobenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:19	MFF
1,1,1-Trichloroethane	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:19	MFF
1,1,2-Trichloroethane	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:19	MFF
Trichloroethylene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:19	MFF
Trichlorofluoromethane (Freon 11)	ND	0.012	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:19	MFF
1,2,3-Trichloropropane	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:19	MFF
1,2,4-Trimethylbenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:19	MFF
1,3,5-Trimethylbenzene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:19	MFF
Vinyl Chloride	ND	0.012	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:19	MFF
m+p Xylene	ND	0.0048	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:19	MFF
o-Xylene	ND	0.0024	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:19	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	87.0	70-130	3/13/19 20:19
Toluene-d8	98.7	70-130	3/13/19 20:19
4-Bromofluorobenzene	102	70-130	3/13/19 20:19

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-C4 (5-10)

Sampled: 3/11/2019 12:35

Sample ID: 19C0442-18

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatle Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.41	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:31	IMR
Acenaphthylene	ND	0.41	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:31	IMR
Acetophenone	ND	0.81	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:31	IMR
Aniline	ND	0.81	mg/Kg dry	2	V-34	SW-846 8270D	3/14/19	3/18/19 16:31	IMR
Anthracene	ND	0.41	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:31	IMR
Benzo(a)anthracene	0.75	0.41	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:31	IMR
Benzo(a)pyrene	0.84	0.41	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:31	IMR
Benzo(b)fluoranthene	1.0	0.41	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:31	IMR
Benzo(g,h,i)perylene	0.61	0.41	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:31	IMR
Benzo(k)fluoranthene	ND	0.41	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:31	IMR
Bis(2-chloroethoxy)methane	ND	0.81	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:31	IMR
Bis(2-chloroethyl)ether	ND	0.81	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:31	IMR
Bis(2-chloroisopropyl)ether	ND	0.81	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:31	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.81	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:31	IMR
4-Bromophenylphenylether	ND	0.81	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:31	IMR
Butylbenzylphthalate	ND	0.81	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:31	IMR
4-Chloroaniline	ND	1.6	mg/Kg dry	2	V-34	SW-846 8270D	3/14/19	3/18/19 16:31	IMR
2-Chloronaphthalene	ND	0.81	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:31	IMR
2-Chlorophenol	ND	0.81	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:31	IMR
Chrysene	0.83	0.41	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:31	IMR
Dibenz(a,h)anthracene	ND	0.41	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:31	IMR
Dibenzofuran	ND	0.81	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:31	IMR
Di-n-butylphthalate	ND	0.81	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:31	IMR
1,2-Dichlorobenzene	ND	0.81	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:31	IMR
1,3-Dichlorobenzene	ND	0.81	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:31	IMR
1,4-Dichlorobenzene	ND	0.81	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:31	IMR
3,3-Dichlorobenzidine	ND	0.41	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:31	IMR
2,4-Dichlorophenol	ND	0.81	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:31	IMR
Diethylphthalate	ND	0.81	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:31	IMR
2,4-Dimethylphenol	ND	0.81	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:31	IMR
Dimethylphthalate	ND	0.81	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:31	IMR
2,4-Dinitrophenol	ND	1.6	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:31	IMR
2,4-Dinitrotoluene	ND	0.81	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:31	IMR
2,6-Dinitrotoluene	ND	0.81	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:31	IMR
Di-n-octylphthalate	ND	0.81	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:31	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.81	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:31	IMR
Fluoranthene	1.6	0.41	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:31	IMR
Fluorene	ND	0.41	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:31	IMR
Hexachlorobenzene	ND	0.81	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:31	IMR
Hexachlorobutadiene	ND	0.81	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:31	IMR
Hexachloroethane	ND	0.81	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:31	IMR
Indeno(1,2,3-cd)pyrene	0.60	0.41	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:31	IMR
Isophorone	ND	0.81	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:31	IMR
2-Methylnaphthalene	ND	0.41	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:31	IMR

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-C4 (5-10)

Sampled: 3/11/2019 12:35

Sample ID: 19C0442-18

Sample Matrix: Soil

Sample Flags: RL-08

**Semivolatile Organic Compounds by GC/MS**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	0.81	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:31	IMR
3/4-Methylphenol	ND	0.81	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:31	IMR
Naphthalene	ND	0.41	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:31	IMR
Nitrobenzene	ND	0.81	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:31	IMR
2-Nitrophenol	ND	0.81	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:31	IMR
4-Nitrophenol	ND	1.6	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:31	IMR
Pentachlorophenol	ND	0.81	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:31	IMR
Phenanthrene	0.76	0.41	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:31	IMR
Phenol	ND	0.81	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:31	IMR
Pyrene	1.5	0.41	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:31	IMR
1,2,4-Trichlorobenzene	ND	0.81	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:31	IMR
2,4,5-Trichlorophenol	ND	0.81	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:31	IMR
2,4,6-Trichlorophenol	ND	0.81	mg/Kg dry	2		SW-846 8270D	3/14/19	3/18/19 16:31	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	61.4	30-130	
Phenol-d6	59.2	30-130	
Nitrobenzene-d5	59.1	30-130	
2-Fluorobiphenyl	61.3	30-130	
2,4,6-Tribromophenol	60.7	30-130	
p-Terphenyl-d14	66.2	30-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-C4 (5-10)

Sampled: 3/11/2019 12:35

Sample ID: 19C0442-18

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.096	mg/Kg dry	4		SW-846 8082A	3/13/19	3/15/19 1:46	JMB
Aroclor-1221 [1]	ND	0.096	mg/Kg dry	4		SW-846 8082A	3/13/19	3/15/19 1:46	JMB
Aroclor-1232 [1]	ND	0.096	mg/Kg dry	4		SW-846 8082A	3/13/19	3/15/19 1:46	JMB
Aroclor-1242 [1]	ND	0.096	mg/Kg dry	4		SW-846 8082A	3/13/19	3/15/19 1:46	JMB
Aroclor-1248 [1]	ND	0.096	mg/Kg dry	4		SW-846 8082A	3/13/19	3/15/19 1:46	JMB
Aroclor-1254 [1]	ND	0.096	mg/Kg dry	4		SW-846 8082A	3/13/19	3/15/19 1:46	JMB
Aroclor-1260 [1]	ND	0.096	mg/Kg dry	4		SW-846 8082A	3/13/19	3/15/19 1:46	JMB
Aroclor-1262 [1]	ND	0.096	mg/Kg dry	4		SW-846 8082A	3/13/19	3/15/19 1:46	JMB
Aroclor-1268 [1]	ND	0.096	mg/Kg dry	4		SW-846 8082A	3/13/19	3/15/19 1:46	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		89.7	30-150					3/15/19 1:46	
Decachlorobiphenyl [2]		94.5	30-150					3/15/19 1:46	
Tetrachloro-m-xylene [1]		96.8	30-150					3/15/19 1:46	
Tetrachloro-m-xylene [2]		94.2	30-150					3/15/19 1:46	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-C4 (5-10)

Sampled: 3/11/2019 12:35

Sample ID: 19C0442-18

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	530	100	mg/Kg dry	10		SW-846 8100 Modified	3/14/19	3/18/19 0:20	RMW
<b>Surrogates</b>		<b>% Recovery</b>	<b>Recovery Limits</b>		<b>Flag/Qual</b>				
2-Fluorobiphenyl		*	40-140		S-01			3/18/19 0:20	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-C4 (5-10)

Sampled: 3/11/2019 12:35

Sample ID: 19C0442-18

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	2.0	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:02	QNW
Arsenic	4.0	2.0	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:02	QNW
Barium	31	2.0	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:02	QNW
Beryllium	0.24	0.20	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:02	QNW
Cadmium	0.34	0.20	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:02	QNW
Chromium	14	0.39	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:02	QNW
Lead	65	0.59	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:02	QNW
Mercury	0.095	0.030	mg/Kg dry	1		SW-846 7471B	3/13/19	3/14/19 12:42	TBC
Nickel	8.9	0.39	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:02	QNW
Selenium	ND	3.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:02	QNW
Silver	ND	0.39	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:02	QNW
Thallium	ND	2.0	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:02	QNW
Vanadium	18	0.78	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:02	QNW
Zinc	58	0.78	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:02	QNW

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-C4 (5-10)

Sampled: 3/11/2019 12:35

Sample ID: 19C0442-18

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	83.1		% Wt	1		SM 2540G	3/18/19	3/18/19 15:53	VLH
Ignitability	Absent		present/absent	1		SW-846 1030	3/13/19	3/13/19 16:45	DJM
pH @19.2°C	7.9		pH Units	1	H-03	SW-846 9045C	3/13/19	3/13/19 10:50	IS
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	3/13/19	3/14/19 11:20	DJM
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	3/13/19	3/14/19 10:45	DJM
Specific conductance	17	2.0	µmhos/cm	1		SM21-22 2510B	3/13/19	3/13/19 12:58	KMV



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-B4 (0-5)

Sampled: 3/11/2019 13:00

Sample ID: 19C0442-19

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.086	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:46	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00086	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:46	MFF
Benzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:46	MFF
Bromobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:46	MFF
Bromochloromethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:46	MFF
Bromodichloromethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:46	MFF
Bromoform	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:46	MFF
Bromomethane	ND	0.0086	mg/Kg dry	1	V-34	SW-846 8260C	3/13/19	3/13/19 20:46	MFF
2-Butanone (MEK)	ND	0.034	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:46	MFF
n-Butylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:46	MFF
sec-Butylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:46	MFF
tert-Butylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:46	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00086	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:46	MFF
Carbon Disulfide	ND	0.0051	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:46	MFF
Carbon Tetrachloride	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:46	MFF
Chlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:46	MFF
Chlorodibromomethane	ND	0.00086	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:46	MFF
Chloroethane	ND	0.0086	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:46	MFF
Chloroform	ND	0.0034	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:46	MFF
Chloromethane	ND	0.0086	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:46	MFF
2-Chlorotoluene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:46	MFF
4-Chlorotoluene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:46	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0034	mg/Kg dry	1	V-05	SW-846 8260C	3/13/19	3/13/19 20:46	MFF
1,2-Dibromoethane (EDB)	ND	0.00086	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:46	MFF
Dibromomethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:46	MFF
1,2-Dichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:46	MFF
1,3-Dichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:46	MFF
1,4-Dichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:46	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0086	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:46	MFF
1,1-Dichloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:46	MFF
1,2-Dichloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:46	MFF
1,1-Dichloroethylene	ND	0.0034	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:46	MFF
cis-1,2-Dichloroethylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:46	MFF
trans-1,2-Dichloroethylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:46	MFF
1,2-Dichloropropane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:46	MFF
1,3-Dichloropropane	ND	0.00086	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:46	MFF
2,2-Dichloropropane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:46	MFF
1,1-Dichloropropene	ND	0.0034	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:46	MFF
cis-1,3-Dichloropropene	ND	0.00086	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:46	MFF
trans-1,3-Dichloropropene	ND	0.00086	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:46	MFF
Diethyl Ether	ND	0.0086	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:46	MFF
Diisopropyl Ether (DIPE)	ND	0.00086	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:46	MFF
1,4-Dioxane	ND	0.17	mg/Kg dry	1	V-16	SW-846 8260C	3/13/19	3/13/19 20:46	MFF
Ethylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:46	MFF

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-B4 (0-5)

Sampled: 3/11/2019 13:00

Sample ID: 19C0442-19

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:46	MFF
2-Hexanone (MBK)	ND	0.017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:46	MFF
Isopropylbenzene (Cumene)	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:46	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:46	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0034	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:46	MFF
Methylene Chloride	ND	0.0086	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:46	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:46	MFF
Naphthalene	ND	0.0034	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:46	MFF
n-Propylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:46	MFF
Styrene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:46	MFF
1,1,1,2-Tetrachloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:46	MFF
1,1,2,2-Tetrachloroethane	ND	0.00086	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:46	MFF
Tetrachloroethylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:46	MFF
Tetrahydrofuran	ND	0.0086	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:46	MFF
Toluene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:46	MFF
1,2,3-Trichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:46	MFF
1,2,4-Trichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:46	MFF
1,1,1-Trichloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:46	MFF
1,1,2-Trichloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:46	MFF
Trichloroethylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:46	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0086	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:46	MFF
1,2,3-Trichloropropane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:46	MFF
1,2,4-Trimethylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:46	MFF
1,3,5-Trimethylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:46	MFF
Vinyl Chloride	ND	0.0086	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:46	MFF
m+p Xylene	ND	0.0034	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:46	MFF
o-Xylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 20:46	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	89.0	70-130	3/13/19 20:46
Toluene-d8	97.5	70-130	3/13/19 20:46
4-Bromofluorobenzene	100	70-130	3/13/19 20:46

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-B4 (0-5)

Sampled: 3/11/2019 13:00

Sample ID: 19C0442-19

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatle Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.92	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 17:00	IMR
Acenaphthylene	ND	0.92	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 17:00	IMR
Acetophenone	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 17:00	IMR
Aniline	ND	1.8	mg/Kg dry	5	V-34	SW-846 8270D	3/14/19	3/18/19 17:00	IMR
Anthracene	ND	0.92	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 17:00	IMR
Benzo(a)anthracene	ND	0.92	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 17:00	IMR
Benzo(a)pyrene	ND	0.92	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 17:00	IMR
Benzo(b)fluoranthene	ND	0.92	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 17:00	IMR
Benzo(g,h,i)perylene	ND	0.92	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 17:00	IMR
Benzo(k)fluoranthene	ND	0.92	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 17:00	IMR
Bis(2-chloroethoxy)methane	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 17:00	IMR
Bis(2-chloroethyl)ether	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 17:00	IMR
Bis(2-chloroisopropyl)ether	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 17:00	IMR
Bis(2-Ethylhexyl)phthalate	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 17:00	IMR
4-Bromophenylphenylether	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 17:00	IMR
Butylbenzylphthalate	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 17:00	IMR
4-Chloroaniline	ND	3.6	mg/Kg dry	5	V-34	SW-846 8270D	3/14/19	3/18/19 17:00	IMR
2-Chloronaphthalene	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 17:00	IMR
2-Chlorophenol	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 17:00	IMR
Chrysene	ND	0.92	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 17:00	IMR
Dibenz(a,h)anthracene	ND	0.92	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 17:00	IMR
Dibenzofuran	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 17:00	IMR
Di-n-butylphthalate	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 17:00	IMR
1,2-Dichlorobenzene	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 17:00	IMR
1,3-Dichlorobenzene	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 17:00	IMR
1,4-Dichlorobenzene	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 17:00	IMR
3,3-Dichlorobenzidine	ND	0.92	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 17:00	IMR
2,4-Dichlorophenol	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 17:00	IMR
Diethylphthalate	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 17:00	IMR
2,4-Dimethylphenol	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 17:00	IMR
Dimethylphthalate	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 17:00	IMR
2,4-Dinitrophenol	ND	3.6	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 17:00	IMR
2,4-Dinitrotoluene	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 17:00	IMR
2,6-Dinitrotoluene	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 17:00	IMR
Di-n-octylphthalate	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 17:00	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 17:00	IMR
Fluoranthene	1.0	0.92	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 17:00	IMR
Fluorene	ND	0.92	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 17:00	IMR
Hexachlorobenzene	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 17:00	IMR
Hexachlorobutadiene	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 17:00	IMR
Hexachloroethane	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 17:00	IMR
Indeno(1,2,3-cd)pyrene	ND	0.92	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 17:00	IMR
Isophorone	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 17:00	IMR
2-Methylnaphthalene	ND	0.92	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 17:00	IMR

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-B4 (0-5)

Sampled: 3/11/2019 13:00

Sample ID: 19C0442-19

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 17:00	IMR
3/4-Methylphenol	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 17:00	IMR
Naphthalene	ND	0.92	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 17:00	IMR
Nitrobenzene	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 17:00	IMR
2-Nitrophenol	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 17:00	IMR
4-Nitrophenol	ND	3.6	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 17:00	IMR
Pentachlorophenol	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 17:00	IMR
Phenanthrene	ND	0.92	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 17:00	IMR
Phenol	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 17:00	IMR
Pyrene	1.0	0.92	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 17:00	IMR
1,2,4-Trichlorobenzene	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 17:00	IMR
2,4,5-Trichlorophenol	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 17:00	IMR
2,4,6-Trichlorophenol	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/14/19	3/18/19 17:00	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	79.5	30-130	
Phenol-d6	76.8	30-130	
Nitrobenzene-d5	73.9	30-130	
2-Fluorobiphenyl	76.8	30-130	
2,4,6-Tribromophenol	70.8	30-130	
p-Terphenyl-d14	84.5	30-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-B4 (0-5)

Sampled: 3/11/2019 13:00

Sample ID: 19C0442-19

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	3/13/19	3/15/19 2:04	JMB
Aroclor-1221 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	3/13/19	3/15/19 2:04	JMB
Aroclor-1232 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	3/13/19	3/15/19 2:04	JMB
Aroclor-1242 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	3/13/19	3/15/19 2:04	JMB
Aroclor-1248 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	3/13/19	3/15/19 2:04	JMB
Aroclor-1254 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	3/13/19	3/15/19 2:04	JMB
Aroclor-1260 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	3/13/19	3/15/19 2:04	JMB
Aroclor-1262 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	3/13/19	3/15/19 2:04	JMB
Aroclor-1268 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	3/13/19	3/15/19 2:04	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		95.5	30-150					3/15/19 2:04	
Decachlorobiphenyl [2]		102	30-150					3/15/19 2:04	
Tetrachloro-m-xylene [1]		103	30-150					3/15/19 2:04	
Tetrachloro-m-xylene [2]		104	30-150					3/15/19 2:04	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-B4 (0-5)

Sampled: 3/11/2019 13:00

Sample ID: 19C0442-19

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	400	91	mg/Kg dry	10		SW-846 8100 Modified	3/14/19	3/18/19 0:40	RMW
<b>Surrogates</b>		<b>% Recovery</b>	<b>Recovery Limits</b>		<b>Flag/Qual</b>				
2-Fluorobiphenyl		63.7	40-140					3/18/19 0:40	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-B4 (0-5)

Sampled: 3/11/2019 13:00

Sample ID: 19C0442-19

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.8	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:07	QNW
Arsenic	4.7	1.8	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:07	QNW
Barium	24	1.8	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:07	QNW
Beryllium	0.22	0.18	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:07	QNW
Cadmium	0.30	0.18	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:07	QNW
Chromium	12	0.35	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:07	QNW
Lead	70	0.53	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:07	QNW
Mercury	ND	0.026	mg/Kg dry	1		SW-846 7471B	3/13/19	3/14/19 12:43	TBC
Nickel	8.9	0.35	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:07	QNW
Selenium	ND	3.5	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:07	QNW
Silver	ND	0.35	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:07	QNW
Thallium	3.4	1.8	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:07	QNW
Vanadium	16	0.70	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:07	QNW
Zinc	31	0.70	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:07	QNW

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-B4 (0-5)

Sampled: 3/11/2019 13:00

Sample ID: 19C0442-19

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	92.0		% Wt	1		SM 2540G	3/18/19	3/18/19 15:53	VLH
Ignitability	Absent		present/absent	1		SW-846 1030	3/13/19	3/13/19 16:45	DJM
pH @17.9°C	8.2		pH Units	1	H-03	SW-846 9045C	3/13/19	3/13/19 10:50	IS
Reactive Cyanide	ND	4.0	mg/Kg	1		SW-846 9014	3/15/19	3/16/19 11:40	KMV
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	3/15/19	3/16/19 10:43	KMV
Specific conductance	24	2.0	µmhos/cm	1		SM21-22 2510B	3/13/19	3/13/19 12:58	KMV



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-B4 (5-10)

Sampled: 3/11/2019 13:10

Sample ID: 19C0442-20

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.088	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:14	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00088	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:14	MFF
Benzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:14	MFF
Bromobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:14	MFF
Bromochloromethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:14	MFF
Bromodichloromethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:14	MFF
Bromoform	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:14	MFF
Bromomethane	ND	0.0088	mg/Kg dry	1	V-34	SW-846 8260C	3/13/19	3/13/19 21:14	MFF
2-Butanone (MEK)	ND	0.035	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:14	MFF
n-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:14	MFF
sec-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:14	MFF
tert-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:14	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00088	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:14	MFF
Carbon Disulfide	ND	0.0053	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:14	MFF
Carbon Tetrachloride	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:14	MFF
Chlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:14	MFF
Chlorodibromomethane	ND	0.00088	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:14	MFF
Chloroethane	ND	0.0088	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:14	MFF
Chloroform	ND	0.0035	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:14	MFF
Chloromethane	ND	0.0088	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:14	MFF
2-Chlorotoluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:14	MFF
4-Chlorotoluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:14	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0035	mg/Kg dry	1	V-05	SW-846 8260C	3/13/19	3/13/19 21:14	MFF
1,2-Dibromoethane (EDB)	ND	0.00088	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:14	MFF
Dibromomethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:14	MFF
1,2-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:14	MFF
1,3-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:14	MFF
1,4-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:14	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0088	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:14	MFF
1,1-Dichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:14	MFF
1,2-Dichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:14	MFF
1,1-Dichloroethylene	ND	0.0035	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:14	MFF
cis-1,2-Dichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:14	MFF
trans-1,2-Dichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:14	MFF
1,2-Dichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:14	MFF
1,3-Dichloropropane	ND	0.00088	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:14	MFF
2,2-Dichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:14	MFF
1,1-Dichloropropene	ND	0.0035	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:14	MFF
cis-1,3-Dichloropropene	ND	0.00088	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:14	MFF
trans-1,3-Dichloropropene	ND	0.00088	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:14	MFF
Diethyl Ether	ND	0.0088	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:14	MFF
Diisopropyl Ether (DIPE)	ND	0.00088	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:14	MFF
1,4-Dioxane	ND	0.18	mg/Kg dry	1	V-16	SW-846 8260C	3/13/19	3/13/19 21:14	MFF
Ethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:14	MFF

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-B4 (5-10)

Sampled: 3/11/2019 13:10

Sample ID: 19C0442-20

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:14	MFF
2-Hexanone (MBK)	ND	0.018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:14	MFF
Isopropylbenzene (Cumene)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:14	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:14	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0035	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:14	MFF
Methylene Chloride	ND	0.0088	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:14	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:14	MFF
Naphthalene	ND	0.0035	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:14	MFF
n-Propylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:14	MFF
Styrene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:14	MFF
1,1,1,2-Tetrachloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:14	MFF
1,1,2,2-Tetrachloroethane	ND	0.00088	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:14	MFF
Tetrachloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:14	MFF
Tetrahydrofuran	ND	0.0088	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:14	MFF
Toluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:14	MFF
1,2,3-Trichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:14	MFF
1,2,4-Trichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:14	MFF
1,1,1-Trichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:14	MFF
1,1,2-Trichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:14	MFF
Trichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:14	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0088	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:14	MFF
1,2,3-Trichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:14	MFF
1,2,4-Trimethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:14	MFF
1,3,5-Trimethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:14	MFF
Vinyl Chloride	ND	0.0088	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:14	MFF
m+p Xylene	ND	0.0035	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:14	MFF
o-Xylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:14	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	88.4	70-130	3/13/19 21:14
Toluene-d8	98.4	70-130	3/13/19 21:14
4-Bromofluorobenzene	104	70-130	3/13/19 21:14

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-B4 (5-10)

Sampled: 3/11/2019 13:10

Sample ID: 19C0442-20

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.20	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 17:15	IMR
Acenaphthylene	0.23	0.20	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 17:15	IMR
Acetophenone	ND	0.40	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 17:15	IMR
Aniline	ND	0.40	mg/Kg dry	1	V-34	SW-846 8270D	3/14/19	3/16/19 17:15	IMR
Anthracene	ND	0.20	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 17:15	IMR
Benzo(a)anthracene	1.1	0.20	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 17:15	IMR
Benzo(a)pyrene	1.1	0.20	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 17:15	IMR
Benzo(b)fluoranthene	1.5	0.20	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 17:15	IMR
Benzo(g,h,i)perylene	0.65	0.20	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 17:15	IMR
Benzo(k)fluoranthene	0.59	0.20	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 17:15	IMR
Bis(2-chloroethoxy)methane	ND	0.40	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 17:15	IMR
Bis(2-chloroethyl)ether	ND	0.40	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 17:15	IMR
Bis(2-chloroisopropyl)ether	ND	0.40	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 17:15	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.40	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 17:15	IMR
4-Bromophenylphenylether	ND	0.40	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 17:15	IMR
Butylbenzylphthalate	ND	0.40	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 17:15	IMR
4-Chloroaniline	ND	0.78	mg/Kg dry	1	V-34	SW-846 8270D	3/14/19	3/16/19 17:15	IMR
2-Chloronaphthalene	ND	0.40	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 17:15	IMR
2-Chlorophenol	ND	0.40	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 17:15	IMR
Chrysene	1.2	0.20	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 17:15	IMR
Dibenz(a,h)anthracene	ND	0.20	mg/Kg dry	1	V-20	SW-846 8270D	3/14/19	3/16/19 17:15	IMR
Dibenzofuran	ND	0.40	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 17:15	IMR
Di-n-butylphthalate	ND	0.40	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 17:15	IMR
1,2-Dichlorobenzene	ND	0.40	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 17:15	IMR
1,3-Dichlorobenzene	ND	0.40	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 17:15	IMR
1,4-Dichlorobenzene	ND	0.40	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 17:15	IMR
3,3-Dichlorobenzidine	ND	0.20	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 17:15	IMR
2,4-Dichlorophenol	ND	0.40	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 17:15	IMR
Diethylphthalate	ND	0.40	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 17:15	IMR
2,4-Dimethylphenol	ND	0.40	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 17:15	IMR
Dimethylphthalate	ND	0.40	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 17:15	IMR
2,4-Dinitrophenol	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 17:15	IMR
2,4-Dinitrotoluene	ND	0.40	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 17:15	IMR
2,6-Dinitrotoluene	ND	0.40	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 17:15	IMR
Di-n-octylphthalate	ND	0.40	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 17:15	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.40	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 17:15	IMR
Fluoranthene	1.8	0.20	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 17:15	IMR
Fluorene	ND	0.20	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 17:15	IMR
Hexachlorobenzene	ND	0.40	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 17:15	IMR
Hexachlorobutadiene	ND	0.40	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 17:15	IMR
Hexachloroethane	ND	0.40	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 17:15	IMR
Indeno(1,2,3-cd)pyrene	0.73	0.20	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 17:15	IMR
Isophorone	ND	0.40	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 17:15	IMR
2-Methylnaphthalene	ND	0.20	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 17:15	IMR

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-B4 (5-10)

Sampled: 3/11/2019 13:10

Sample ID: 19C0442-20

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	0.40	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 17:15	IMR
3/4-Methylphenol	ND	0.40	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 17:15	IMR
Naphthalene	ND	0.20	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 17:15	IMR
Nitrobenzene	ND	0.40	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 17:15	IMR
2-Nitrophenol	ND	0.40	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 17:15	IMR
4-Nitrophenol	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 17:15	IMR
Pentachlorophenol	ND	0.40	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 17:15	IMR
Phenanthrene	0.81	0.20	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 17:15	IMR
Phenol	ND	0.40	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 17:15	IMR
Pyrene	2.2	0.20	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 17:15	IMR
1,2,4-Trichlorobenzene	ND	0.40	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 17:15	IMR
2,4,5-Trichlorophenol	ND	0.40	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 17:15	IMR
2,4,6-Trichlorophenol	ND	0.40	mg/Kg dry	1		SW-846 8270D	3/14/19	3/16/19 17:15	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	70.9	30-130	
Phenol-d6	72.5	30-130	
Nitrobenzene-d5	72.9	30-130	
2-Fluorobiphenyl	80.9	30-130	
2,4,6-Tribromophenol	83.2	30-130	
p-Terphenyl-d14	90.6	30-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-B4 (5-10)

Sampled: 3/11/2019 13:10

Sample ID: 19C0442-20

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.093	mg/Kg dry	4		SW-846 8082A	3/13/19	3/15/19 2:22	JMB
Aroclor-1221 [1]	ND	0.093	mg/Kg dry	4		SW-846 8082A	3/13/19	3/15/19 2:22	JMB
Aroclor-1232 [1]	ND	0.093	mg/Kg dry	4		SW-846 8082A	3/13/19	3/15/19 2:22	JMB
Aroclor-1242 [1]	ND	0.093	mg/Kg dry	4		SW-846 8082A	3/13/19	3/15/19 2:22	JMB
Aroclor-1248 [1]	ND	0.093	mg/Kg dry	4		SW-846 8082A	3/13/19	3/15/19 2:22	JMB
Aroclor-1254 [1]	ND	0.093	mg/Kg dry	4		SW-846 8082A	3/13/19	3/15/19 2:22	JMB
Aroclor-1260 [1]	ND	0.093	mg/Kg dry	4		SW-846 8082A	3/13/19	3/15/19 2:22	JMB
Aroclor-1262 [1]	ND	0.093	mg/Kg dry	4		SW-846 8082A	3/13/19	3/15/19 2:22	JMB
Aroclor-1268 [1]	ND	0.093	mg/Kg dry	4		SW-846 8082A	3/13/19	3/15/19 2:22	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		89.2	30-150					3/15/19 2:22	
Decachlorobiphenyl [2]		93.9	30-150					3/15/19 2:22	
Tetrachloro-m-xylene [1]		97.3	30-150					3/15/19 2:22	
Tetrachloro-m-xylene [2]		97.0	30-150					3/15/19 2:22	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-B4 (5-10)

Sampled: 3/11/2019 13:10

Sample ID: 19C0442-20

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	390	200	mg/Kg dry	20		SW-846 8100 Modified	3/14/19	3/16/19 18:13	RMW
<b>Surrogates</b>		<b>% Recovery</b>	<b>Recovery Limits</b>		<b>Flag/Qual</b>				
2-Fluorobiphenyl		*	40-140		S-01			3/16/19 18:13	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-B4 (5-10)

Sampled: 3/11/2019 13:10

Sample ID: 19C0442-20

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	2.0	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:12	QNW
Arsenic	11	2.0	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:12	QNW
Barium	41	2.0	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:12	QNW
Beryllium	0.35	0.20	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:12	QNW
Cadmium	0.61	0.20	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:12	QNW
Chromium	16	0.40	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:12	QNW
Lead	120	0.61	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:12	QNW
Mercury	0.084	0.029	mg/Kg dry	1		SW-846 7471B	3/13/19	3/14/19 12:49	TBC
Nickel	11	0.40	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:12	QNW
Selenium	ND	4.0	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:12	QNW
Silver	ND	0.40	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:12	QNW
Thallium	4.2	2.0	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:12	QNW
Vanadium	20	0.81	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:12	QNW
Zinc	69	0.81	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:12	QNW

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-B4 (5-10)

Sampled: 3/11/2019 13:10

Sample ID: 19C0442-20

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	83.1		% Wt	1		SM 2540G	3/18/19	3/18/19 15:53	VLH
Ignitability	Absent		present/absent	1		SW-846 1030	3/13/19	3/13/19 16:45	DJM
pH @17.7°C	7.6		pH Units	1	H-03	SW-846 9045C	3/13/19	3/13/19 10:50	IS
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	3/15/19	3/16/19 11:40	KMV
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	3/15/19	3/16/19 10:43	KMV
Specific conductance	7.2	2.0	µmhos/cm	1		SM21-22 2510B Modified	3/14/19	3/14/19 12:40	EC



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-A5 (0-5)

Sampled: 3/11/2019 13:25

Sample ID: 19C0442-21

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.11	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:41	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.0011	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:41	MFF
Benzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:41	MFF
Bromobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:41	MFF
Bromochloromethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:41	MFF
Bromodichloromethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:41	MFF
Bromoform	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:41	MFF
Bromomethane	ND	0.011	mg/Kg dry	1	V-34	SW-846 8260C	3/13/19	3/13/19 21:41	MFF
2-Butanone (MEK)	ND	0.042	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:41	MFF
n-Butylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:41	MFF
sec-Butylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:41	MFF
tert-Butylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:41	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.0011	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:41	MFF
Carbon Disulfide	ND	0.0063	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:41	MFF
Carbon Tetrachloride	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:41	MFF
Chlorobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:41	MFF
Chlorodibromomethane	ND	0.0011	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:41	MFF
Chloroethane	ND	0.011	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:41	MFF
Chloroform	ND	0.0042	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:41	MFF
Chloromethane	ND	0.011	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:41	MFF
2-Chlorotoluene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:41	MFF
4-Chlorotoluene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:41	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0042	mg/Kg dry	1	V-05	SW-846 8260C	3/13/19	3/13/19 21:41	MFF
1,2-Dibromoethane (EDB)	ND	0.0011	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:41	MFF
Dibromomethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:41	MFF
1,2-Dichlorobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:41	MFF
1,3-Dichlorobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:41	MFF
1,4-Dichlorobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:41	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.011	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:41	MFF
1,1-Dichloroethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:41	MFF
1,2-Dichloroethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:41	MFF
1,1-Dichloroethylene	ND	0.0042	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:41	MFF
cis-1,2-Dichloroethylene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:41	MFF
trans-1,2-Dichloroethylene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:41	MFF
1,2-Dichloropropane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:41	MFF
1,3-Dichloropropane	ND	0.0011	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:41	MFF
2,2-Dichloropropane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:41	MFF
1,1-Dichloropropene	ND	0.0042	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:41	MFF
cis-1,3-Dichloropropene	ND	0.0011	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:41	MFF
trans-1,3-Dichloropropene	ND	0.0011	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:41	MFF
Diethyl Ether	ND	0.011	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:41	MFF
Diisopropyl Ether (DIPE)	ND	0.0011	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:41	MFF
1,4-Dioxane	ND	0.21	mg/Kg dry	1	V-16	SW-846 8260C	3/13/19	3/13/19 21:41	MFF
Ethylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:41	MFF

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-A5 (0-5)

Sampled: 3/11/2019 13:25

Sample ID: 19C0442-21

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:41	MFF
2-Hexanone (MBK)	ND	0.021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:41	MFF
Isopropylbenzene (Cumene)	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:41	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:41	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0042	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:41	MFF
Methylene Chloride	ND	0.011	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:41	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:41	MFF
Naphthalene	ND	0.0042	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:41	MFF
n-Propylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:41	MFF
Styrene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:41	MFF
1,1,1,2-Tetrachloroethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:41	MFF
1,1,2,2-Tetrachloroethane	ND	0.0011	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:41	MFF
Tetrachloroethylene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:41	MFF
Tetrahydrofuran	ND	0.011	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:41	MFF
Toluene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:41	MFF
1,2,3-Trichlorobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:41	MFF
1,2,4-Trichlorobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:41	MFF
1,1,1-Trichloroethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:41	MFF
1,1,2-Trichloroethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:41	MFF
Trichloroethylene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:41	MFF
Trichlorofluoromethane (Freon 11)	ND	0.011	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:41	MFF
1,2,3-Trichloropropane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:41	MFF
1,2,4-Trimethylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:41	MFF
1,3,5-Trimethylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:41	MFF
Vinyl Chloride	ND	0.011	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:41	MFF
m+p Xylene	ND	0.0042	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:41	MFF
o-Xylene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 21:41	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	87.1	70-130	
Toluene-d8	99.0	70-130	
4-Bromofluorobenzene	102	70-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-A5 (0-5)

Sampled: 3/11/2019 13:25

Sample ID: 19C0442-21

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatle Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.78	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 21:13	IMR
Acenaphthylene	ND	0.78	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 21:13	IMR
Acetophenone	ND	1.6	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 21:13	IMR
Aniline	ND	1.6	mg/Kg dry	4	V-34	SW-846 8270D	3/14/19	3/15/19 21:13	IMR
Anthracene	ND	0.78	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 21:13	IMR
Benzo(a)anthracene	1.6	0.78	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 21:13	IMR
Benzo(a)pyrene	1.5	0.78	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 21:13	IMR
Benzo(b)fluoranthene	1.8	0.78	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 21:13	IMR
Benzo(g,h,i)perylene	0.93	0.78	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 21:13	IMR
Benzo(k)fluoranthene	ND	0.78	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 21:13	IMR
Bis(2-chloroethoxy)methane	ND	1.6	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 21:13	IMR
Bis(2-chloroethyl)ether	ND	1.6	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 21:13	IMR
Bis(2-chloroisopropyl)ether	ND	1.6	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 21:13	IMR
Bis(2-Ethylhexyl)phthalate	ND	1.6	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 21:13	IMR
4-Bromophenylphenylether	ND	1.6	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 21:13	IMR
Butylbenzylphthalate	ND	1.6	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 21:13	IMR
4-Chloroaniline	ND	3.0	mg/Kg dry	4	V-34	SW-846 8270D	3/14/19	3/15/19 21:13	IMR
2-Chloronaphthalene	ND	1.6	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 21:13	IMR
2-Chlorophenol	ND	1.6	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 21:13	IMR
Chrysene	1.4	0.78	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 21:13	IMR
Dibenz(a,h)anthracene	ND	0.78	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 21:13	IMR
Dibenzofuran	ND	1.6	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 21:13	IMR
Di-n-butylphthalate	ND	1.6	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 21:13	IMR
1,2-Dichlorobenzene	ND	1.6	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 21:13	IMR
1,3-Dichlorobenzene	ND	1.6	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 21:13	IMR
1,4-Dichlorobenzene	ND	1.6	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 21:13	IMR
3,3-Dichlorobenzidine	ND	0.78	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 21:13	IMR
2,4-Dichlorophenol	ND	1.6	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 21:13	IMR
Diethylphthalate	ND	1.6	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 21:13	IMR
2,4-Dimethylphenol	ND	1.6	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 21:13	IMR
Dimethylphthalate	ND	1.6	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 21:13	IMR
2,4-Dinitrophenol	ND	3.0	mg/Kg dry	4	V-05	SW-846 8270D	3/14/19	3/15/19 21:13	IMR
2,4-Dinitrotoluene	ND	1.6	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 21:13	IMR
2,6-Dinitrotoluene	ND	1.6	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 21:13	IMR
Di-n-octylphthalate	ND	1.6	mg/Kg dry	4	V-20	SW-846 8270D	3/14/19	3/15/19 21:13	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	1.6	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 21:13	IMR
Fluoranthene	3.2	0.78	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 21:13	IMR
Fluorene	ND	0.78	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 21:13	IMR
Hexachlorobenzene	ND	1.6	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 21:13	IMR
Hexachlorobutadiene	ND	1.6	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 21:13	IMR
Hexachloroethane	ND	1.6	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 21:13	IMR
Indeno(1,2,3-cd)pyrene	0.95	0.78	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 21:13	IMR
Isophorone	ND	1.6	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 21:13	IMR
2-Methylnaphthalene	ND	0.78	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 21:13	IMR

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-A5 (0-5)

Sampled: 3/11/2019 13:25

Sample ID: 19C0442-21

Sample Matrix: Soil

Sample Flags: RL-08

**Semivolatile Organic Compounds by GC/MS**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	1.6	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 21:13	IMR
3/4-Methylphenol	ND	1.6	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 21:13	IMR
Naphthalene	ND	0.78	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 21:13	IMR
Nitrobenzene	ND	1.6	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 21:13	IMR
2-Nitrophenol	ND	1.6	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 21:13	IMR
4-Nitrophenol	ND	3.0	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 21:13	IMR
Pentachlorophenol	ND	1.6	mg/Kg dry	4	V-05	SW-846 8270D	3/14/19	3/15/19 21:13	IMR
Phenanthrene	2.7	0.78	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 21:13	IMR
Phenol	ND	1.6	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 21:13	IMR
Pyrene	3.2	0.78	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 21:13	IMR
1,2,4-Trichlorobenzene	ND	1.6	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 21:13	IMR
2,4,5-Trichlorophenol	ND	1.6	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 21:13	IMR
2,4,6-Trichlorophenol	ND	1.6	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 21:13	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	81.6	30-130	
Phenol-d6	83.7	30-130	
Nitrobenzene-d5	89.9	30-130	
2-Fluorobiphenyl	78.4	30-130	
2,4,6-Tribromophenol	79.0	30-130	
p-Terphenyl-d14	101	30-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-A5 (0-5)

Sampled: 3/11/2019 13:25

Sample ID: 19C0442-21

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 12:31	TG
Aroclor-1221 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 12:31	TG
Aroclor-1232 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 12:31	TG
Aroclor-1242 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 12:31	TG
Aroclor-1248 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 12:31	TG
Aroclor-1254 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 12:31	TG
Aroclor-1260 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 12:31	TG
Aroclor-1262 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 12:31	TG
Aroclor-1268 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 12:31	TG
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		79.9	30-150					3/18/19 12:31	
Decachlorobiphenyl [2]		80.7	30-150					3/18/19 12:31	
Tetrachloro-m-xylene [1]		88.8	30-150					3/18/19 12:31	
Tetrachloro-m-xylene [2]		85.3	30-150					3/18/19 12:31	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Sampled: 3/11/2019 13:25

Field Sample #: TP-A5 (0-5)

Sample ID: 19C0442-21

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	1400	480	mg/Kg dry	50		SW-846 8100 Modified	3/14/19	3/16/19 6:17	KLB
<b>Surrogates</b>		<b>% Recovery</b>	<b>Recovery Limits</b>		<b>Flag/Qual</b>				
2-Fluorobiphenyl		*	40-140		S-01			3/16/19 6:17	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-A5 (0-5)

Sampled: 3/11/2019 13:25

Sample ID: 19C0442-21

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:32	QNW
Arsenic	5.7	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:32	QNW
Barium	40	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:32	QNW
Beryllium	0.28	0.19	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:32	QNW
Cadmium	0.45	0.19	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:32	QNW
Chromium	14	0.38	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:32	QNW
Lead	43	0.57	mg/Kg dry	1	M-10	SW-846 6010D	3/13/19	3/14/19 15:32	QNW
Mercury	0.055	0.029	mg/Kg dry	1		SW-846 7471B	3/13/19	3/14/19 14:16	TBC
Nickel	11	0.38	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:32	QNW
Selenium	ND	3.8	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:32	QNW
Silver	ND	0.38	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:32	QNW
Thallium	ND	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:32	QNW
Vanadium	29	0.76	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:32	QNW
Zinc	52	0.76	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:32	QNW

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-A5 (0-5)

Sampled: 3/11/2019 13:25

Sample ID: 19C0442-21

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	85.7		% Wt	1		SM 2540G	3/18/19	3/18/19 15:53	VLH
Ignitability	Absent		present/absent	1		SW-846 1030	3/14/19	3/14/19 11:10	KMV
pH @19.7°C	7.7		pH Units	1	H-03	SW-846 9045C	3/13/19	3/13/19 10:50	IS
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	3/15/19	3/16/19 11:40	KMV
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	3/15/19	3/16/19 10:43	KMV
Specific conductance	23	2.0	µmhos/cm	1		SM21-22 2510B Modified	3/14/19	3/14/19 12:49	EC



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-A5 (5-10)

Sampled: 3/11/2019 13:30

Sample ID: 19C0442-22

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.094	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:09	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00094	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:09	MFF
Benzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:09	MFF
Bromobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:09	MFF
Bromochloromethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:09	MFF
Bromodichloromethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:09	MFF
Bromoform	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:09	MFF
Bromomethane	ND	0.0094	mg/Kg dry	1	V-34	SW-846 8260C	3/13/19	3/13/19 22:09	MFF
2-Butanone (MEK)	ND	0.037	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:09	MFF
n-Butylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:09	MFF
sec-Butylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:09	MFF
tert-Butylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:09	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00094	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:09	MFF
Carbon Disulfide	ND	0.0056	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:09	MFF
Carbon Tetrachloride	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:09	MFF
Chlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:09	MFF
Chlorodibromomethane	ND	0.00094	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:09	MFF
Chloroethane	ND	0.0094	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:09	MFF
Chloroform	ND	0.0037	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:09	MFF
Chloromethane	ND	0.0094	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:09	MFF
2-Chlorotoluene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:09	MFF
4-Chlorotoluene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:09	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0037	mg/Kg dry	1	V-05	SW-846 8260C	3/13/19	3/13/19 22:09	MFF
1,2-Dibromoethane (EDB)	ND	0.00094	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:09	MFF
Dibromomethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:09	MFF
1,2-Dichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:09	MFF
1,3-Dichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:09	MFF
1,4-Dichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:09	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0094	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:09	MFF
1,1-Dichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:09	MFF
1,2-Dichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:09	MFF
1,1-Dichloroethylene	ND	0.0037	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:09	MFF
cis-1,2-Dichloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:09	MFF
trans-1,2-Dichloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:09	MFF
1,2-Dichloropropane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:09	MFF
1,3-Dichloropropane	ND	0.00094	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:09	MFF
2,2-Dichloropropane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:09	MFF
1,1-Dichloropropene	ND	0.0037	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:09	MFF
cis-1,3-Dichloropropene	ND	0.00094	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:09	MFF
trans-1,3-Dichloropropene	ND	0.00094	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:09	MFF
Diethyl Ether	ND	0.0094	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:09	MFF
Diisopropyl Ether (DIPE)	ND	0.00094	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:09	MFF
1,4-Dioxane	ND	0.19	mg/Kg dry	1	V-16	SW-846 8260C	3/13/19	3/13/19 22:09	MFF
Ethylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:09	MFF

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-A5 (5-10)

Sampled: 3/11/2019 13:30

Sample ID: 19C0442-22

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:09	MFF
2-Hexanone (MBK)	ND	0.019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:09	MFF
Isopropylbenzene (Cumene)	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:09	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:09	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0037	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:09	MFF
Methylene Chloride	ND	0.0094	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:09	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:09	MFF
Naphthalene	ND	0.0037	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:09	MFF
n-Propylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:09	MFF
Styrene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:09	MFF
1,1,1,2-Tetrachloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:09	MFF
1,1,2,2-Tetrachloroethane	ND	0.00094	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:09	MFF
Tetrachloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:09	MFF
Tetrahydrofuran	ND	0.0094	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:09	MFF
Toluene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:09	MFF
1,2,3-Trichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:09	MFF
1,2,4-Trichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:09	MFF
1,1,1-Trichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:09	MFF
1,1,2-Trichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:09	MFF
Trichloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:09	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0094	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:09	MFF
1,2,3-Trichloropropane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:09	MFF
1,2,4-Trimethylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:09	MFF
1,3,5-Trimethylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:09	MFF
Vinyl Chloride	ND	0.0094	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:09	MFF
m+p Xylene	ND	0.0037	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:09	MFF
o-Xylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:09	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	87.6	70-130	3/13/19 22:09
Toluene-d8	97.3	70-130	3/13/19 22:09
4-Bromofluorobenzene	99.3	70-130	3/13/19 22:09

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-A5 (5-10)

Sampled: 3/11/2019 13:30

Sample ID: 19C0442-22

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatle Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.98	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 21:38	IMR
Acenaphthylene	ND	0.98	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 21:38	IMR
Acetophenone	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 21:38	IMR
Aniline	ND	2.0	mg/Kg dry	5	V-34	SW-846 8270D	3/14/19	3/15/19 21:38	IMR
Anthracene	ND	0.98	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 21:38	IMR
Benzo(a)anthracene	2.1	0.98	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 21:38	IMR
Benzo(a)pyrene	2.0	0.98	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 21:38	IMR
Benzo(b)fluoranthene	2.5	0.98	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 21:38	IMR
Benzo(g,h,i)perylene	1.2	0.98	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 21:38	IMR
Benzo(k)fluoranthene	ND	0.98	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 21:38	IMR
Bis(2-chloroethoxy)methane	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 21:38	IMR
Bis(2-chloroethyl)ether	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 21:38	IMR
Bis(2-chloroisopropyl)ether	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 21:38	IMR
Bis(2-Ethylhexyl)phthalate	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 21:38	IMR
4-Bromophenylphenylether	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 21:38	IMR
Butylbenzylphthalate	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 21:38	IMR
4-Chloroaniline	ND	3.8	mg/Kg dry	5	V-34	SW-846 8270D	3/14/19	3/15/19 21:38	IMR
2-Chloronaphthalene	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 21:38	IMR
2-Chlorophenol	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 21:38	IMR
Chrysene	1.9	0.98	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 21:38	IMR
Dibenz(a,h)anthracene	ND	0.98	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 21:38	IMR
Dibenzofuran	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 21:38	IMR
Di-n-butylphthalate	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 21:38	IMR
1,2-Dichlorobenzene	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 21:38	IMR
1,3-Dichlorobenzene	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 21:38	IMR
1,4-Dichlorobenzene	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 21:38	IMR
3,3-Dichlorobenzidine	ND	0.98	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 21:38	IMR
2,4-Dichlorophenol	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 21:38	IMR
Diethylphthalate	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 21:38	IMR
2,4-Dimethylphenol	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 21:38	IMR
Dimethylphthalate	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 21:38	IMR
2,4-Dinitrophenol	ND	3.8	mg/Kg dry	5	V-05	SW-846 8270D	3/14/19	3/15/19 21:38	IMR
2,4-Dinitrotoluene	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 21:38	IMR
2,6-Dinitrotoluene	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 21:38	IMR
Di-n-octylphthalate	ND	2.0	mg/Kg dry	5	V-20	SW-846 8270D	3/14/19	3/15/19 21:38	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 21:38	IMR
Fluoranthene	3.8	0.98	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 21:38	IMR
Fluorene	ND	0.98	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 21:38	IMR
Hexachlorobenzene	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 21:38	IMR
Hexachlorobutadiene	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 21:38	IMR
Hexachloroethane	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 21:38	IMR
Indeno(1,2,3-cd)pyrene	1.3	0.98	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 21:38	IMR
Isophorone	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 21:38	IMR
2-Methylnaphthalene	ND	0.98	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 21:38	IMR

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-A5 (5-10)

Sampled: 3/11/2019 13:30

Sample ID: 19C0442-22

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 21:38	IMR
3/4-Methylphenol	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 21:38	IMR
Naphthalene	ND	0.98	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 21:38	IMR
Nitrobenzene	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 21:38	IMR
2-Nitrophenol	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 21:38	IMR
4-Nitrophenol	ND	3.8	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 21:38	IMR
Pentachlorophenol	ND	2.0	mg/Kg dry	5	V-05	SW-846 8270D	3/14/19	3/15/19 21:38	IMR
Phenanthrene	2.3	0.98	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 21:38	IMR
Phenol	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 21:38	IMR
Pyrene	4.3	0.98	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 21:38	IMR
1,2,4-Trichlorobenzene	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 21:38	IMR
2,4,5-Trichlorophenol	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 21:38	IMR
2,4,6-Trichlorophenol	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 21:38	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	95.2	30-130	
Phenol-d6	98.6	30-130	
Nitrobenzene-d5	105	30-130	
2-Fluorobiphenyl	92.4	30-130	
2,4,6-Tribromophenol	92.7	30-130	
p-Terphenyl-d14	122	30-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-A5 (5-10)

Sampled: 3/11/2019 13:30

Sample ID: 19C0442-22

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 12:49	TG
Aroclor-1221 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 12:49	TG
Aroclor-1232 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 12:49	TG
Aroclor-1242 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 12:49	TG
Aroclor-1248 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 12:49	TG
Aroclor-1254 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 12:49	TG
Aroclor-1260 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 12:49	TG
Aroclor-1262 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 12:49	TG
Aroclor-1268 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 12:49	TG
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		85.3	30-150					3/18/19 12:49	
Decachlorobiphenyl [2]		82.6	30-150					3/18/19 12:49	
Tetrachloro-m-xylene [1]		95.7	30-150					3/18/19 12:49	
Tetrachloro-m-xylene [2]		91.3	30-150					3/18/19 12:49	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-A5 (5-10)

Sampled: 3/11/2019 13:30

Sample ID: 19C0442-22

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	1300	480	mg/Kg dry	50		SW-846 8100 Modified	3/14/19	3/16/19 6:37	KLB
<b>Surrogates</b>		<b>% Recovery</b>	<b>Recovery Limits</b>		<b>Flag/Qual</b>				
2-Fluorobiphenyl		*	40-140		S-01			3/16/19 6:37	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-A5 (5-10)

Sampled: 3/11/2019 13:30

Sample ID: 19C0442-22

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:48	QNW
Arsenic	4.5	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:48	QNW
Barium	34	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:48	QNW
Beryllium	0.28	0.19	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:48	QNW
Cadmium	0.41	0.19	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:48	QNW
Chromium	17	0.38	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:48	QNW
Lead	35	0.57	mg/Kg dry	1	M-10	SW-846 6010D	3/13/19	3/14/19 15:48	QNW
Mercury	0.054	0.030	mg/Kg dry	1		SW-846 7471B	3/13/19	3/14/19 14:17	TBC
Nickel	13	0.38	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:48	QNW
Selenium	ND	3.8	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:48	QNW
Silver	ND	0.38	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 14:30	QNW
Thallium	ND	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:48	QNW
Vanadium	24	0.76	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:48	QNW
Zinc	44	0.76	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:48	QNW

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-A5 (5-10)

Sampled: 3/11/2019 13:30

Sample ID: 19C0442-22

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	86.0		% Wt	1		SM 2540G	3/18/19	3/18/19 15:54	VLH
Ignitability	Absent		present/absent	1		SW-846 1030	3/14/19	3/14/19 11:10	KMV
pH @18.2°C	7.8		pH Units	1	H-03	SW-846 9045C	3/13/19	3/13/19 10:50	IS
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	3/15/19	3/16/19 11:40	KMV
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	3/15/19	3/16/19 10:43	KMV
Specific conductance	20	2.0	µmhos/cm	1		SM21-22 2510B Modified	3/14/19	3/14/19 12:49	EC



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-A4 (0-5)

Sampled: 3/11/2019 14:00

Sample ID: 19C0442-23

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.079	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:36	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00079	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:36	MFF
Benzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:36	MFF
Bromobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:36	MFF
Bromochloromethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:36	MFF
Bromodichloromethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:36	MFF
Bromoform	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:36	MFF
Bromomethane	ND	0.0079	mg/Kg dry	1	V-34	SW-846 8260C	3/13/19	3/13/19 22:36	MFF
2-Butanone (MEK)	ND	0.032	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:36	MFF
n-Butylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:36	MFF
sec-Butylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:36	MFF
tert-Butylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:36	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00079	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:36	MFF
Carbon Disulfide	ND	0.0047	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:36	MFF
Carbon Tetrachloride	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:36	MFF
Chlorobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:36	MFF
Chlorodibromomethane	ND	0.00079	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:36	MFF
Chloroethane	ND	0.0079	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:36	MFF
Chloroform	ND	0.0032	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:36	MFF
Chloromethane	ND	0.0079	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:36	MFF
2-Chlorotoluene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:36	MFF
4-Chlorotoluene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:36	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0032	mg/Kg dry	1	V-05	SW-846 8260C	3/13/19	3/13/19 22:36	MFF
1,2-Dibromoethane (EDB)	ND	0.00079	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:36	MFF
Dibromomethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:36	MFF
1,2-Dichlorobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:36	MFF
1,3-Dichlorobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:36	MFF
1,4-Dichlorobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:36	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0079	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:36	MFF
1,1-Dichloroethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:36	MFF
1,2-Dichloroethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:36	MFF
1,1-Dichloroethylene	ND	0.0032	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:36	MFF
cis-1,2-Dichloroethylene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:36	MFF
trans-1,2-Dichloroethylene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:36	MFF
1,2-Dichloropropane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:36	MFF
1,3-Dichloropropane	ND	0.00079	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:36	MFF
2,2-Dichloropropane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:36	MFF
1,1-Dichloropropene	ND	0.0032	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:36	MFF
cis-1,3-Dichloropropene	ND	0.00079	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:36	MFF
trans-1,3-Dichloropropene	ND	0.00079	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:36	MFF
Diethyl Ether	ND	0.0079	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:36	MFF
Diisopropyl Ether (DIPE)	ND	0.00079	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:36	MFF
1,4-Dioxane	ND	0.16	mg/Kg dry	1	V-16	SW-846 8260C	3/13/19	3/13/19 22:36	MFF
Ethylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:36	MFF

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-A4 (0-5)

Sampled: 3/11/2019 14:00

Sample ID: 19C0442-23

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:36	MFF
2-Hexanone (MBK)	ND	0.016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:36	MFF
Isopropylbenzene (Cumene)	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:36	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:36	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0032	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:36	MFF
Methylene Chloride	ND	0.0079	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:36	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:36	MFF
Naphthalene	ND	0.0032	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:36	MFF
n-Propylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:36	MFF
Styrene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:36	MFF
1,1,1,2-Tetrachloroethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:36	MFF
1,1,2,2-Tetrachloroethane	ND	0.00079	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:36	MFF
Tetrachloroethylene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:36	MFF
Tetrahydrofuran	ND	0.0079	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:36	MFF
Toluene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:36	MFF
1,2,3-Trichlorobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:36	MFF
1,2,4-Trichlorobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:36	MFF
1,1,1-Trichloroethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:36	MFF
1,1,2-Trichloroethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:36	MFF
Trichloroethylene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:36	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0079	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:36	MFF
1,2,3-Trichloropropane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:36	MFF
1,2,4-Trimethylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:36	MFF
1,3,5-Trimethylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:36	MFF
Vinyl Chloride	ND	0.0079	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:36	MFF
m+p Xylene	ND	0.0032	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:36	MFF
o-Xylene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 22:36	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	91.3	70-130	3/13/19 22:36
Toluene-d8	100	70-130	3/13/19 22:36
4-Bromofluorobenzene	102	70-130	3/13/19 22:36

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-A4 (0-5)

Sampled: 3/11/2019 14:00

Sample ID: 19C0442-23

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatle Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.96	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 22:04	IMR
Acenaphthylene	ND	0.96	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 22:04	IMR
Acetophenone	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 22:04	IMR
Aniline	ND	1.9	mg/Kg dry	5	V-34	SW-846 8270D	3/14/19	3/15/19 22:04	IMR
Anthracene	ND	0.96	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 22:04	IMR
Benzo(a)anthracene	1.4	0.96	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 22:04	IMR
Benzo(a)pyrene	1.5	0.96	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 22:04	IMR
Benzo(b)fluoranthene	1.7	0.96	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 22:04	IMR
Benzo(g,h,i)perylene	ND	0.96	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 22:04	IMR
Benzo(k)fluoranthene	ND	0.96	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 22:04	IMR
Bis(2-chloroethoxy)methane	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 22:04	IMR
Bis(2-chloroethyl)ether	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 22:04	IMR
Bis(2-chloroisopropyl)ether	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 22:04	IMR
Bis(2-Ethylhexyl)phthalate	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 22:04	IMR
4-Bromophenylphenylether	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 22:04	IMR
Butylbenzylphthalate	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 22:04	IMR
4-Chloroaniline	ND	3.7	mg/Kg dry	5	V-34	SW-846 8270D	3/14/19	3/15/19 22:04	IMR
2-Chloronaphthalene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 22:04	IMR
2-Chlorophenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 22:04	IMR
Chrysene	1.4	0.96	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 22:04	IMR
Dibenz(a,h)anthracene	ND	0.96	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 22:04	IMR
Dibenzofuran	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 22:04	IMR
Di-n-butylphthalate	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 22:04	IMR
1,2-Dichlorobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 22:04	IMR
1,3-Dichlorobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 22:04	IMR
1,4-Dichlorobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 22:04	IMR
3,3-Dichlorobenzidine	ND	0.96	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 22:04	IMR
2,4-Dichlorophenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 22:04	IMR
Diethylphthalate	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 22:04	IMR
2,4-Dimethylphenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 22:04	IMR
Dimethylphthalate	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 22:04	IMR
2,4-Dinitrophenol	ND	3.7	mg/Kg dry	5	V-05	SW-846 8270D	3/14/19	3/15/19 22:04	IMR
2,4-Dinitrotoluene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 22:04	IMR
2,6-Dinitrotoluene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 22:04	IMR
Di-n-octylphthalate	ND	1.9	mg/Kg dry	5	V-20	SW-846 8270D	3/14/19	3/15/19 22:04	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 22:04	IMR
Fluoranthene	2.8	0.96	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 22:04	IMR
Fluorene	ND	0.96	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 22:04	IMR
Hexachlorobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 22:04	IMR
Hexachlorobutadiene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 22:04	IMR
Hexachloroethane	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 22:04	IMR
Indeno(1,2,3-cd)pyrene	ND	0.96	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 22:04	IMR
Isophorone	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 22:04	IMR
2-Methylnaphthalene	ND	0.96	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 22:04	IMR

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-A4 (0-5)

Sampled: 3/11/2019 14:00

Sample ID: 19C0442-23

Sample Matrix: Soil

Sample Flags: RL-08

**Semivolatile Organic Compounds by GC/MS**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 22:04	IMR
3/4-Methylphenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 22:04	IMR
Naphthalene	ND	0.96	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 22:04	IMR
Nitrobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 22:04	IMR
2-Nitrophenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 22:04	IMR
4-Nitrophenol	ND	3.7	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 22:04	IMR
Pentachlorophenol	ND	1.9	mg/Kg dry	5	V-05	SW-846 8270D	3/14/19	3/15/19 22:04	IMR
Phenanthrene	1.6	0.96	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 22:04	IMR
Phenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 22:04	IMR
Pyrene	3.2	0.96	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 22:04	IMR
1,2,4-Trichlorobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 22:04	IMR
2,4,5-Trichlorophenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 22:04	IMR
2,4,6-Trichlorophenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 22:04	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	84.4	30-130	
Phenol-d6	88.9	30-130	
Nitrobenzene-d5	91.0	30-130	
2-Fluorobiphenyl	82.1	30-130	
2,4,6-Tribromophenol	82.6	30-130	
p-Terphenyl-d14	108	30-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-A4 (0-5)

Sampled: 3/11/2019 14:00

Sample ID: 19C0442-23

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.087	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 13:06	TG
Aroclor-1221 [1]	ND	0.087	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 13:06	TG
Aroclor-1232 [1]	ND	0.087	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 13:06	TG
Aroclor-1242 [1]	ND	0.087	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 13:06	TG
Aroclor-1248 [1]	ND	0.087	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 13:06	TG
Aroclor-1254 [1]	ND	0.087	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 13:06	TG
Aroclor-1260 [1]	ND	0.087	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 13:06	TG
Aroclor-1262 [1]	ND	0.087	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 13:06	TG
Aroclor-1268 [1]	ND	0.087	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 13:06	TG
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		88.5	30-150					3/18/19 13:06	
Decachlorobiphenyl [2]		87.7	30-150					3/18/19 13:06	
Tetrachloro-m-xylene [1]		104	30-150					3/18/19 13:06	
Tetrachloro-m-xylene [2]		96.8	30-150					3/18/19 13:06	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-A4 (0-5)

Sampled: 3/11/2019 14:00

Sample ID: 19C0442-23

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	1000	470	mg/Kg dry	50		SW-846 8100 Modified	3/14/19	3/16/19 6:57	KLB
<b>Surrogates</b>		<b>% Recovery</b>	<b>Recovery Limits</b>		<b>Flag/Qual</b>				
2-Fluorobiphenyl		*	40-140		S-01			3/16/19 6:57	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-A4 (0-5)

Sampled: 3/11/2019 14:00

Sample ID: 19C0442-23

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:53	QNW
Arsenic	5.4	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:53	QNW
Barium	33	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:53	QNW
Beryllium	0.29	0.19	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:53	QNW
Cadmium	0.39	0.19	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:53	QNW
Chromium	14	0.38	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:53	QNW
Lead	44	0.57	mg/Kg dry	1	M-10	SW-846 6010D	3/13/19	3/14/19 15:53	QNW
Mercury	0.095	0.028	mg/Kg dry	1		SW-846 7471B	3/13/19	3/14/19 14:19	TBC
Nickel	11	0.38	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:53	QNW
Selenium	ND	3.8	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:53	QNW
Silver	ND	0.38	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 14:35	QNW
Thallium	ND	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:53	QNW
Vanadium	21	0.76	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:53	QNW
Zinc	48	0.76	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:53	QNW

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-A4 (0-5)

Sampled: 3/11/2019 14:00

Sample ID: 19C0442-23

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	86.6		% Wt	1		SM 2540G	3/18/19	3/18/19 15:54	VLH
Ignitability	Absent		present/absent	1		SW-846 1030	3/14/19	3/14/19 11:10	KMV
pH @18.6°C	7.9		pH Units	1	H-03	SW-846 9045C	3/13/19	3/13/19 10:50	IS
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	3/15/19	3/16/19 11:40	KMV
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	3/15/19	3/16/19 10:43	KMV
Specific conductance	20	2.0	µmhos/cm	1		SM21-22 2510B Modified	3/14/19	3/14/19 12:49	EC



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

Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-A4 (5-10)

Sampled: 3/11/2019 14:05

Sample ID: 19C0442-24

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.095	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:03	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00095	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:03	MFF
Benzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:03	MFF
Bromobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:03	MFF
Bromochloromethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:03	MFF
Bromodichloromethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:03	MFF
Bromoform	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:03	MFF
Bromomethane	ND	0.0095	mg/Kg dry	1	V-34	SW-846 8260C	3/13/19	3/13/19 23:03	MFF
2-Butanone (MEK)	ND	0.038	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:03	MFF
n-Butylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:03	MFF
sec-Butylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:03	MFF
tert-Butylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:03	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00095	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:03	MFF
Carbon Disulfide	ND	0.0057	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:03	MFF
Carbon Tetrachloride	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:03	MFF
Chlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:03	MFF
Chlorodibromomethane	ND	0.00095	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:03	MFF
Chloroethane	ND	0.0095	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:03	MFF
Chloroform	ND	0.0038	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:03	MFF
Chloromethane	ND	0.0095	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:03	MFF
2-Chlorotoluene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:03	MFF
4-Chlorotoluene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:03	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0038	mg/Kg dry	1	V-05	SW-846 8260C	3/13/19	3/13/19 23:03	MFF
1,2-Dibromoethane (EDB)	ND	0.00095	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:03	MFF
Dibromomethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:03	MFF
1,2-Dichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:03	MFF
1,3-Dichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:03	MFF
1,4-Dichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:03	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0095	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:03	MFF
1,1-Dichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:03	MFF
1,2-Dichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:03	MFF
1,1-Dichloroethylene	ND	0.0038	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:03	MFF
cis-1,2-Dichloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:03	MFF
trans-1,2-Dichloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:03	MFF
1,2-Dichloropropane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:03	MFF
1,3-Dichloropropane	ND	0.00095	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:03	MFF
2,2-Dichloropropane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:03	MFF
1,1-Dichloropropene	ND	0.0038	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:03	MFF
cis-1,3-Dichloropropene	ND	0.00095	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:03	MFF
trans-1,3-Dichloropropene	ND	0.00095	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:03	MFF
Diethyl Ether	ND	0.0095	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:03	MFF
Diisopropyl Ether (DIPE)	ND	0.00095	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:03	MFF
1,4-Dioxane	ND	0.19	mg/Kg dry	1	V-16	SW-846 8260C	3/13/19	3/13/19 23:03	MFF
Ethylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:03	MFF

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-A4 (5-10)

Sampled: 3/11/2019 14:05

Sample ID: 19C0442-24

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:03	MFF
2-Hexanone (MBK)	ND	0.019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:03	MFF
Isopropylbenzene (Cumene)	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:03	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:03	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0038	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:03	MFF
Methylene Chloride	ND	0.0095	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:03	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:03	MFF
Naphthalene	ND	0.0038	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:03	MFF
n-Propylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:03	MFF
Styrene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:03	MFF
1,1,1,2-Tetrachloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:03	MFF
1,1,2,2-Tetrachloroethane	ND	0.00095	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:03	MFF
Tetrachloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:03	MFF
Tetrahydrofuran	ND	0.0095	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:03	MFF
Toluene	0.0022	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:03	MFF
1,2,3-Trichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:03	MFF
1,2,4-Trichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:03	MFF
1,1,1-Trichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:03	MFF
1,1,2-Trichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:03	MFF
Trichloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:03	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0095	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:03	MFF
1,2,3-Trichloropropane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:03	MFF
1,2,4-Trimethylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:03	MFF
1,3,5-Trimethylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:03	MFF
Vinyl Chloride	ND	0.0095	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:03	MFF
m+p Xylene	ND	0.0038	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:03	MFF
o-Xylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:03	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	90.8	70-130	3/13/19 23:03
Toluene-d8	96.4	70-130	3/13/19 23:03
4-Bromofluorobenzene	101	70-130	3/13/19 23:03

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-A4 (5-10)

Sampled: 3/11/2019 14:05

Sample ID: 19C0442-24

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatiles Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.98	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:09	IMR
Acenaphthylene	ND	0.98	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:09	IMR
Acetophenone	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:09	IMR
Aniline	ND	2.0	mg/Kg dry	5	V-34	SW-846 8270D	3/14/19	3/15/19 16:09	IMR
Anthracene	1.2	0.98	mg/Kg dry	5	MS-09	SW-846 8270D	3/14/19	3/15/19 16:09	IMR
Benzo(a)anthracene	1.4	0.98	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:09	IMR
Benzo(a)pyrene	1.5	0.98	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:09	IMR
Benzo(b)fluoranthene	1.8	0.98	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:09	IMR
Benzo(g,h,i)perylene	1.1	0.98	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:09	IMR
Benzo(k)fluoranthene	ND	0.98	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:09	IMR
Bis(2-chloroethoxy)methane	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:09	IMR
Bis(2-chloroethyl)ether	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:09	IMR
Bis(2-chloroisopropyl)ether	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:09	IMR
Bis(2-Ethylhexyl)phthalate	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:09	IMR
4-Bromophenylphenylether	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:09	IMR
Butylbenzylphthalate	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:09	IMR
4-Chloroaniline	ND	3.8	mg/Kg dry	5	V-34	SW-846 8270D	3/14/19	3/15/19 16:09	IMR
2-Chloronaphthalene	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:09	IMR
2-Chlorophenol	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:09	IMR
Chrysene	1.3	0.98	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:09	IMR
Dibenz(a,h)anthracene	ND	0.98	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:09	IMR
Dibenzofuran	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:09	IMR
Di-n-butylphthalate	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:09	IMR
1,2-Dichlorobenzene	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:09	IMR
1,3-Dichlorobenzene	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:09	IMR
1,4-Dichlorobenzene	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:09	IMR
3,3-Dichlorobenzidine	ND	0.98	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:09	IMR
2,4-Dichlorophenol	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:09	IMR
Diethylphthalate	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:09	IMR
2,4-Dimethylphenol	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:09	IMR
Dimethylphthalate	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:09	IMR
2,4-Dinitrophenol	ND	3.8	mg/Kg dry	5	MS-09, V-05	SW-846 8270D	3/14/19	3/15/19 16:09	IMR
2,4-Dinitrotoluene	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:09	IMR
2,6-Dinitrotoluene	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:09	IMR
Di-n-octylphthalate	ND	2.0	mg/Kg dry	5	V-20	SW-846 8270D	3/14/19	3/15/19 16:09	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:09	IMR
Fluoranthene	2.5	0.98	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:09	IMR
Fluorene	ND	0.98	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:09	IMR
Hexachlorobenzene	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:09	IMR
Hexachlorobutadiene	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:09	IMR
Hexachloroethane	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:09	IMR
Indeno(1,2,3-cd)pyrene	1.1	0.98	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:09	IMR
Isophorone	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:09	IMR
2-Methylnaphthalene	ND	0.98	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:09	IMR

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-A4 (5-10)

Sampled: 3/11/2019 14:05

Sample ID: 19C0442-24

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:09	IMR
3/4-Methylphenol	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:09	IMR
Naphthalene	ND	0.98	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:09	IMR
Nitrobenzene	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:09	IMR
2-Nitrophenol	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:09	IMR
4-Nitrophenol	ND	3.8	mg/Kg dry	5	MS-09	SW-846 8270D	3/14/19	3/15/19 16:09	IMR
Pentachlorophenol	ND	2.0	mg/Kg dry	5	V-05	SW-846 8270D	3/14/19	3/15/19 16:09	IMR
Phenanthrene	1.3	0.98	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:09	IMR
Phenol	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:09	IMR
Pyrene	2.8	0.98	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:09	IMR
1,2,4-Trichlorobenzene	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:09	IMR
2,4,5-Trichlorophenol	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:09	IMR
2,4,6-Trichlorophenol	ND	2.0	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:09	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	65.4	30-130	
Phenol-d6	68.0	30-130	
Nitrobenzene-d5	74.3	30-130	
2-Fluorobiphenyl	65.3	30-130	
2,4,6-Tribromophenol	59.8	30-130	
p-Terphenyl-d14	81.2	30-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-A4 (5-10)

Sampled: 3/11/2019 14:05

Sample ID: 19C0442-24

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.091	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 13:24	TG
Aroclor-1221 [1]	ND	0.091	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 13:24	TG
Aroclor-1232 [1]	ND	0.091	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 13:24	TG
Aroclor-1242 [1]	ND	0.091	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 13:24	TG
Aroclor-1248 [1]	ND	0.091	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 13:24	TG
Aroclor-1254 [1]	ND	0.091	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 13:24	TG
Aroclor-1260 [1]	ND	0.091	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 13:24	TG
Aroclor-1262 [1]	ND	0.091	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 13:24	TG
Aroclor-1268 [1]	ND	0.091	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 13:24	TG
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		94.9	30-150					3/18/19 13:24	
Decachlorobiphenyl [2]		93.7	30-150					3/18/19 13:24	
Tetrachloro-m-xylene [1]		110	30-150					3/18/19 13:24	
Tetrachloro-m-xylene [2]		104	30-150					3/18/19 13:24	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-A4 (5-10)

Sampled: 3/11/2019 14:05

Sample ID: 19C0442-24

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	1000	480	mg/Kg dry	50		SW-846 8100 Modified	3/14/19	3/16/19 5:57	KLB
<b>Surrogates</b>		<b>% Recovery</b>	<b>Recovery Limits</b>		<b>Flag/Qual</b>				
2-Fluorobiphenyl		*	40-140		S-01			3/16/19 5:57	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-A4 (5-10)

Sampled: 3/11/2019 14:05

Sample ID: 19C0442-24

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:58	QNW
Arsenic	4.0	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:58	QNW
Barium	34	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:58	QNW
Beryllium	0.28	0.19	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:58	QNW
Cadmium	0.30	0.19	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:58	QNW
Chromium	17	0.38	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:58	QNW
Lead	36	0.57	mg/Kg dry	1	M-10	SW-846 6010D	3/13/19	3/14/19 15:58	QNW
Mercury	0.044	0.028	mg/Kg dry	1		SW-846 7471B	3/13/19	3/14/19 14:14	TBC
Nickel	13	0.38	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:58	QNW
Selenium	ND	3.8	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:58	QNW
Silver	ND	0.38	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 14:40	QNW
Thallium	ND	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:58	QNW
Vanadium	28	0.76	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:58	QNW
Zinc	42	0.76	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:58	QNW

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-A4 (5-10)

Sampled: 3/11/2019 14:05

Sample ID: 19C0442-24

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	86.4		% Wt	1		SM 2540G	3/18/19	3/18/19 15:54	VLH
Ignitability	Absent		present/absent	1		SW-846 1030	3/14/19	3/14/19 11:10	KMV
pH @18.3°C	8.2		pH Units	1	H-03	SW-846 9045C	3/13/19	3/13/19 10:50	IS
Reactive Cyanide	ND	4.0	mg/Kg	1		SW-846 9014	3/14/19	3/15/19 11:07	KMV
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	3/14/19	3/15/19 10:28	KMV
Specific conductance	24	2.0	µmhos/cm	1		SM21-22 2510B Modified	3/14/19	3/14/19 12:49	EC



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-A3 (0-5)

Sampled: 3/11/2019 14:15

Sample ID: 19C0442-25

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.090	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:31	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00090	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:31	MFF
Benzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:31	MFF
Bromobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:31	MFF
Bromochloromethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:31	MFF
Bromodichloromethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:31	MFF
Bromoform	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:31	MFF
Bromomethane	ND	0.0090	mg/Kg dry	1	V-34	SW-846 8260C	3/13/19	3/13/19 23:31	MFF
2-Butanone (MEK)	ND	0.036	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:31	MFF
n-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:31	MFF
sec-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:31	MFF
tert-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:31	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00090	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:31	MFF
Carbon Disulfide	ND	0.0054	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:31	MFF
Carbon Tetrachloride	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:31	MFF
Chlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:31	MFF
Chlorodibromomethane	ND	0.00090	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:31	MFF
Chloroethane	ND	0.0090	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:31	MFF
Chloroform	ND	0.0036	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:31	MFF
Chloromethane	ND	0.0090	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:31	MFF
2-Chlorotoluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:31	MFF
4-Chlorotoluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:31	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0036	mg/Kg dry	1	V-05	SW-846 8260C	3/13/19	3/13/19 23:31	MFF
1,2-Dibromoethane (EDB)	ND	0.00090	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:31	MFF
Dibromomethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:31	MFF
1,2-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:31	MFF
1,3-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:31	MFF
1,4-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:31	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0090	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:31	MFF
1,1-Dichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:31	MFF
1,2-Dichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:31	MFF
1,1-Dichloroethylene	ND	0.0036	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:31	MFF
cis-1,2-Dichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:31	MFF
trans-1,2-Dichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:31	MFF
1,2-Dichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:31	MFF
1,3-Dichloropropane	ND	0.00090	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:31	MFF
2,2-Dichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:31	MFF
1,1-Dichloropropene	ND	0.0036	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:31	MFF
cis-1,3-Dichloropropene	ND	0.00090	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:31	MFF
trans-1,3-Dichloropropene	ND	0.00090	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:31	MFF
Diethyl Ether	ND	0.0090	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:31	MFF
Diisopropyl Ether (DIPE)	ND	0.00090	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:31	MFF
1,4-Dioxane	ND	0.18	mg/Kg dry	1	V-16	SW-846 8260C	3/13/19	3/13/19 23:31	MFF
Ethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:31	MFF

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-A3 (0-5)

Sampled: 3/11/2019 14:15

Sample ID: 19C0442-25

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:31	MFF
2-Hexanone (MBK)	ND	0.018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:31	MFF
Isopropylbenzene (Cumene)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:31	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:31	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0036	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:31	MFF
Methylene Chloride	ND	0.0090	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:31	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:31	MFF
Naphthalene	ND	0.0036	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:31	MFF
n-Propylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:31	MFF
Styrene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:31	MFF
1,1,1,2-Tetrachloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:31	MFF
1,1,2,2-Tetrachloroethane	ND	0.00090	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:31	MFF
Tetrachloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:31	MFF
Tetrahydrofuran	ND	0.0090	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:31	MFF
Toluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:31	MFF
1,2,3-Trichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:31	MFF
1,2,4-Trichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:31	MFF
1,1,1-Trichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:31	MFF
1,1,2-Trichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:31	MFF
Trichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:31	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0090	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:31	MFF
1,2,3-Trichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:31	MFF
1,2,4-Trimethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:31	MFF
1,3,5-Trimethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:31	MFF
Vinyl Chloride	ND	0.0090	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:31	MFF
m+p Xylene	ND	0.0036	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:31	MFF
o-Xylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:31	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	88.0	70-130	3/13/19 23:31
Toluene-d8	101	70-130	3/13/19 23:31
4-Bromofluorobenzene	99.0	70-130	3/13/19 23:31

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-A3 (0-5)

Sampled: 3/11/2019 14:15

Sample ID: 19C0442-25

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.77	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 16:34	IMR
Acenaphthylene	ND	0.77	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 16:34	IMR
Acetophenone	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 16:34	IMR
Aniline	ND	1.5	mg/Kg dry	4	V-34	SW-846 8270D	3/14/19	3/15/19 16:34	IMR
Anthracene	ND	0.77	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 16:34	IMR
Benzo(a)anthracene	1.2	0.77	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 16:34	IMR
Benzo(a)pyrene	1.2	0.77	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 16:34	IMR
Benzo(b)fluoranthene	1.5	0.77	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 16:34	IMR
Benzo(g,h,i)perylene	0.80	0.77	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 16:34	IMR
Benzo(k)fluoranthene	ND	0.77	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 16:34	IMR
Bis(2-chloroethoxy)methane	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 16:34	IMR
Bis(2-chloroethyl)ether	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 16:34	IMR
Bis(2-chloroisopropyl)ether	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 16:34	IMR
Bis(2-Ethylhexyl)phthalate	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 16:34	IMR
4-Bromophenylphenylether	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 16:34	IMR
Butylbenzylphthalate	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 16:34	IMR
4-Chloroaniline	ND	3.0	mg/Kg dry	4	V-34	SW-846 8270D	3/14/19	3/15/19 16:34	IMR
2-Chloronaphthalene	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 16:34	IMR
2-Chlorophenol	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 16:34	IMR
Chrysene	1.2	0.77	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 16:34	IMR
Dibenz(a,h)anthracene	ND	0.77	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 16:34	IMR
Dibenzofuran	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 16:34	IMR
Di-n-butylphthalate	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 16:34	IMR
1,2-Dichlorobenzene	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 16:34	IMR
1,3-Dichlorobenzene	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 16:34	IMR
1,4-Dichlorobenzene	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 16:34	IMR
3,3-Dichlorobenzidine	ND	0.77	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 16:34	IMR
2,4-Dichlorophenol	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 16:34	IMR
Diethylphthalate	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 16:34	IMR
2,4-Dimethylphenol	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 16:34	IMR
Dimethylphthalate	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 16:34	IMR
2,4-Dinitrophenol	ND	3.0	mg/Kg dry	4	V-05	SW-846 8270D	3/14/19	3/15/19 16:34	IMR
2,4-Dinitrotoluene	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 16:34	IMR
2,6-Dinitrotoluene	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 16:34	IMR
Di-n-octylphthalate	ND	1.5	mg/Kg dry	4	V-20	SW-846 8270D	3/14/19	3/15/19 16:34	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 16:34	IMR
Fluoranthene	2.4	0.77	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 16:34	IMR
Fluorene	ND	0.77	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 16:34	IMR
Hexachlorobenzene	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 16:34	IMR
Hexachlorobutadiene	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 16:34	IMR
Hexachloroethane	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 16:34	IMR
Indeno(1,2,3-cd)pyrene	ND	0.77	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 16:34	IMR
Isophorone	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 16:34	IMR
2-Methylnaphthalene	ND	0.77	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 16:34	IMR

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-A3 (0-5)

Sampled: 3/11/2019 14:15

Sample ID: 19C0442-25

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 16:34	IMR
3/4-Methylphenol	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 16:34	IMR
Naphthalene	ND	0.77	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 16:34	IMR
Nitrobenzene	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 16:34	IMR
2-Nitrophenol	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 16:34	IMR
4-Nitrophenol	ND	3.0	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 16:34	IMR
Pentachlorophenol	ND	1.5	mg/Kg dry	4	V-05	SW-846 8270D	3/14/19	3/15/19 16:34	IMR
Phenanthrene	1.3	0.77	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 16:34	IMR
Phenol	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 16:34	IMR
Pyrene	2.2	0.77	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 16:34	IMR
1,2,4-Trichlorobenzene	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 16:34	IMR
2,4,5-Trichlorophenol	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 16:34	IMR
2,4,6-Trichlorophenol	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 16:34	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	83.0	30-130	
Phenol-d6	87.0	30-130	
Nitrobenzene-d5	91.1	30-130	
2-Fluorobiphenyl	84.4	30-130	
2,4,6-Tribromophenol	77.9	30-130	
p-Terphenyl-d14	92.4	30-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-A3 (0-5)

Sampled: 3/11/2019 14:15

Sample ID: 19C0442-25

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 13:42	TG
Aroclor-1221 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 13:42	TG
Aroclor-1232 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 13:42	TG
Aroclor-1242 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 13:42	TG
Aroclor-1248 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 13:42	TG
Aroclor-1254 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 13:42	TG
Aroclor-1260 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 13:42	TG
Aroclor-1262 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 13:42	TG
Aroclor-1268 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 13:42	TG
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		87.5	30-150					3/18/19 13:42	
Decachlorobiphenyl [2]		83.0	30-150					3/18/19 13:42	
Tetrachloro-m-xylene [1]		101	30-150					3/18/19 13:42	
Tetrachloro-m-xylene [2]		97.8	30-150					3/18/19 13:42	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-A3 (0-5)

Sampled: 3/11/2019 14:15

Sample ID: 19C0442-25

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	790	470	mg/Kg dry	50		SW-846 8100 Modified	3/14/19	3/16/19 6:17	KLB
<b>Surrogates</b>		<b>% Recovery</b>	<b>Recovery Limits</b>		<b>Flag/Qual</b>				
2-Fluorobiphenyl		*	40-140		S-01			3/16/19 6:17	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-A3 (0-5)

Sampled: 3/11/2019 14:15

Sample ID: 19C0442-25

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 16:03	QNW
Arsenic	7.0	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 16:03	QNW
Barium	36	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 16:03	QNW
Beryllium	0.26	0.19	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 16:03	QNW
Cadmium	0.45	0.19	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 16:03	QNW
Chromium	13	0.38	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 16:03	QNW
Lead	69	0.56	mg/Kg dry	1	M-10	SW-846 6010D	3/13/19	3/14/19 16:03	QNW
Mercury	0.042	0.029	mg/Kg dry	1		SW-846 7471B	3/13/19	3/14/19 14:21	TBC
Nickel	9.8	0.38	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 16:03	QNW
Selenium	ND	3.8	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 16:03	QNW
Silver	ND	0.38	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 14:45	QNW
Thallium	ND	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 16:03	QNW
Vanadium	18	0.75	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 16:03	QNW
Zinc	49	0.75	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 16:03	QNW

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-A3 (0-5)

Sampled: 3/11/2019 14:15

Sample ID: 19C0442-25

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	88.1		% Wt	1		SM 2540G	3/18/19	3/18/19 15:54	VLH
Ignitability	Absent		present/absent	1		SW-846 1030	3/14/19	3/14/19 11:10	KMV
pH @18.1°C	7.9		pH Units	1	H-03	SW-846 9045C	3/13/19	3/13/19 10:50	IS
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	3/15/19	3/16/19 11:40	KMV
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	3/15/19	3/16/19 10:43	KMV
Specific conductance	14	2.0	µmhos/cm	1		SM21-22 2510B Modified	3/14/19	3/14/19 12:49	EC



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-A3 (5-10)

Sampled: 3/11/2019 14:20

Sample ID: 19C0442-26

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.081	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:58	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00081	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:58	MFF
Benzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:58	MFF
Bromobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:58	MFF
Bromochloromethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:58	MFF
Bromodichloromethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:58	MFF
Bromoform	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:58	MFF
Bromomethane	ND	0.0081	mg/Kg dry	1	V-34	SW-846 8260C	3/13/19	3/13/19 23:58	MFF
2-Butanone (MEK)	ND	0.033	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:58	MFF
n-Butylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:58	MFF
sec-Butylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:58	MFF
tert-Butylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:58	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00081	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:58	MFF
Carbon Disulfide	ND	0.0049	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:58	MFF
Carbon Tetrachloride	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:58	MFF
Chlorobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:58	MFF
Chlorodibromomethane	ND	0.00081	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:58	MFF
Chloroethane	ND	0.0081	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:58	MFF
Chloroform	ND	0.0033	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:58	MFF
Chloromethane	ND	0.0081	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:58	MFF
2-Chlorotoluene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:58	MFF
4-Chlorotoluene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:58	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0033	mg/Kg dry	1	V-05	SW-846 8260C	3/13/19	3/13/19 23:58	MFF
1,2-Dibromoethane (EDB)	ND	0.00081	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:58	MFF
Dibromomethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:58	MFF
1,2-Dichlorobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:58	MFF
1,3-Dichlorobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:58	MFF
1,4-Dichlorobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:58	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0081	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:58	MFF
1,1-Dichloroethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:58	MFF
1,2-Dichloroethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:58	MFF
1,1-Dichloroethylene	ND	0.0033	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:58	MFF
cis-1,2-Dichloroethylene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:58	MFF
trans-1,2-Dichloroethylene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:58	MFF
1,2-Dichloropropane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:58	MFF
1,3-Dichloropropane	ND	0.00081	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:58	MFF
2,2-Dichloropropane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:58	MFF
1,1-Dichloropropene	ND	0.0033	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:58	MFF
cis-1,3-Dichloropropene	ND	0.00081	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:58	MFF
trans-1,3-Dichloropropene	ND	0.00081	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:58	MFF
Diethyl Ether	ND	0.0081	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:58	MFF
Diisopropyl Ether (DIPE)	ND	0.00081	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:58	MFF
1,4-Dioxane	ND	0.16	mg/Kg dry	1	V-16	SW-846 8260C	3/13/19	3/13/19 23:58	MFF
Ethylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:58	MFF

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-A3 (5-10)

Sampled: 3/11/2019 14:20

Sample ID: 19C0442-26

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:58	MFF
2-Hexanone (MBK)	ND	0.016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:58	MFF
Isopropylbenzene (Cumene)	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:58	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:58	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0033	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:58	MFF
Methylene Chloride	ND	0.0081	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:58	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:58	MFF
Naphthalene	ND	0.0033	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:58	MFF
n-Propylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:58	MFF
Styrene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:58	MFF
1,1,1,2-Tetrachloroethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:58	MFF
1,1,2,2-Tetrachloroethane	ND	0.00081	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:58	MFF
Tetrachloroethylene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:58	MFF
Tetrahydrofuran	ND	0.0081	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:58	MFF
Toluene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:58	MFF
1,2,3-Trichlorobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:58	MFF
1,2,4-Trichlorobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:58	MFF
1,1,1-Trichloroethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:58	MFF
1,1,2-Trichloroethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:58	MFF
Trichloroethylene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:58	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0081	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:58	MFF
1,2,3-Trichloropropane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:58	MFF
1,2,4-Trimethylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:58	MFF
1,3,5-Trimethylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:58	MFF
Vinyl Chloride	ND	0.0081	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:58	MFF
m+p Xylene	ND	0.0033	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:58	MFF
o-Xylene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/13/19 23:58	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	89.0	70-130	
Toluene-d8	99.3	70-130	
4-Bromofluorobenzene	102	70-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-A3 (5-10)

Sampled: 3/11/2019 14:20

Sample ID: 19C0442-26

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatiles Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.96	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:59	IMR
Acenaphthylene	ND	0.96	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:59	IMR
Acetophenone	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:59	IMR
Aniline	ND	1.9	mg/Kg dry	5	V-34	SW-846 8270D	3/14/19	3/15/19 16:59	IMR
Anthracene	ND	0.96	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:59	IMR
Benzo(a)anthracene	1.2	0.96	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:59	IMR
Benzo(a)pyrene	1.2	0.96	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:59	IMR
Benzo(b)fluoranthene	1.3	0.96	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:59	IMR
Benzo(g,h,i)perylene	ND	0.96	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:59	IMR
Benzo(k)fluoranthene	ND	0.96	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:59	IMR
Bis(2-chloroethoxy)methane	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:59	IMR
Bis(2-chloroethyl)ether	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:59	IMR
Bis(2-chloroisopropyl)ether	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:59	IMR
Bis(2-Ethylhexyl)phthalate	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:59	IMR
4-Bromophenylphenylether	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:59	IMR
Butylbenzylphthalate	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:59	IMR
4-Chloroaniline	ND	3.7	mg/Kg dry	5	V-34	SW-846 8270D	3/14/19	3/15/19 16:59	IMR
2-Chloronaphthalene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:59	IMR
2-Chlorophenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:59	IMR
Chrysene	1.2	0.96	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:59	IMR
Dibenz(a,h)anthracene	ND	0.96	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:59	IMR
Dibenzofuran	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:59	IMR
Di-n-butylphthalate	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:59	IMR
1,2-Dichlorobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:59	IMR
1,3-Dichlorobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:59	IMR
1,4-Dichlorobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:59	IMR
3,3-Dichlorobenzidine	ND	0.96	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:59	IMR
2,4-Dichlorophenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:59	IMR
Diethylphthalate	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:59	IMR
2,4-Dimethylphenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:59	IMR
Dimethylphthalate	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:59	IMR
2,4-Dinitrophenol	ND	3.7	mg/Kg dry	5	V-05	SW-846 8270D	3/14/19	3/15/19 16:59	IMR
2,4-Dinitrotoluene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:59	IMR
2,6-Dinitrotoluene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:59	IMR
Di-n-octylphthalate	ND	1.9	mg/Kg dry	5	V-20	SW-846 8270D	3/14/19	3/15/19 16:59	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:59	IMR
Fluoranthene	1.9	0.96	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:59	IMR
Fluorene	ND	0.96	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:59	IMR
Hexachlorobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:59	IMR
Hexachlorobutadiene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:59	IMR
Hexachloroethane	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:59	IMR
Indeno(1,2,3-cd)pyrene	ND	0.96	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:59	IMR
Isophorone	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:59	IMR
2-Methylnaphthalene	ND	0.96	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:59	IMR

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-A3 (5-10)

Sampled: 3/11/2019 14:20

Sample ID: 19C0442-26

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:59	IMR
3/4-Methylphenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:59	IMR
Naphthalene	ND	0.96	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:59	IMR
Nitrobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:59	IMR
2-Nitrophenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:59	IMR
4-Nitrophenol	ND	3.7	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:59	IMR
Pentachlorophenol	ND	1.9	mg/Kg dry	5	V-05	SW-846 8270D	3/14/19	3/15/19 16:59	IMR
Phenanthrene	1.2	0.96	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:59	IMR
Phenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:59	IMR
Pyrene	2.4	0.96	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:59	IMR
1,2,4-Trichlorobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:59	IMR
2,4,5-Trichlorophenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:59	IMR
2,4,6-Trichlorophenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 16:59	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	78.2	30-130	
Phenol-d6	81.1	30-130	
Nitrobenzene-d5	86.7	30-130	
2-Fluorobiphenyl	78.7	30-130	
2,4,6-Tribromophenol	76.0	30-130	
p-Terphenyl-d14	93.7	30-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-A3 (5-10)

Sampled: 3/11/2019 14:20

Sample ID: 19C0442-26

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 13:59	TG
Aroclor-1221 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 13:59	TG
Aroclor-1232 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 13:59	TG
Aroclor-1242 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 13:59	TG
Aroclor-1248 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 13:59	TG
Aroclor-1254 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 13:59	TG
Aroclor-1260 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 13:59	TG
Aroclor-1262 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 13:59	TG
Aroclor-1268 [1]	ND	0.086	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 13:59	TG
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		87.9	30-150					3/18/19 13:59	
Decachlorobiphenyl [2]		84.1	30-150					3/18/19 13:59	
Tetrachloro-m-xylene [1]		101	30-150					3/18/19 13:59	
Tetrachloro-m-xylene [2]		94.9	30-150					3/18/19 13:59	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-A3 (5-10)

Sampled: 3/11/2019 14:20

Sample ID: 19C0442-26

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	940	470	mg/Kg dry	50		SW-846 8100 Modified	3/14/19	3/16/19 6:37	KLB
<b>Surrogates</b>		<b>% Recovery</b>	<b>Recovery Limits</b>		<b>Flag/Qual</b>				
2-Fluorobiphenyl		*	40-140		S-01			3/16/19 6:37	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-A3 (5-10)

Sampled: 3/11/2019 14:20

Sample ID: 19C0442-26

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 16:08	QNW
Arsenic	5.7	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 16:08	QNW
Barium	30	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 16:08	QNW
Beryllium	0.26	0.19	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 16:08	QNW
Cadmium	0.38	0.19	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 16:08	QNW
Chromium	15	0.38	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 16:08	QNW
Lead	48	0.57	mg/Kg dry	1	M-10	SW-846 6010D	3/13/19	3/14/19 16:08	QNW
Mercury	0.039	0.027	mg/Kg dry	1		SW-846 7471B	3/13/19	3/14/19 14:22	TBC
Nickel	12	0.38	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 16:08	QNW
Selenium	ND	3.8	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 16:08	QNW
Silver	ND	0.38	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 14:50	QNW
Thallium	ND	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 16:08	QNW
Vanadium	23	0.76	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 16:08	QNW
Zinc	43	0.76	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 16:08	QNW

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-A3 (5-10)

Sampled: 3/11/2019 14:20

Sample ID: 19C0442-26

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	88.2		% Wt	1		SM 2540G	3/18/19	3/18/19 15:55	VLH
Ignitability	Absent		present/absent	1		SW-846 1030	3/14/19	3/14/19 11:10	KMV
pH @17.9°C	8.1		pH Units	1	H-03	SW-846 9045C	3/13/19	3/13/19 10:50	IS
Reactive Cyanide	ND	4.0	mg/Kg	1		SW-846 9014	3/14/19	3/15/19 11:07	KMV
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	3/14/19	3/15/19 10:28	KMV
Specific conductance	21	2.0	µmhos/cm	1		SM21-22 2510B Modified	3/14/19	3/14/19 12:49	EC



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-B3 (0-5)

Sampled: 3/11/2019 14:45

Sample ID: 19C0442-27

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.094	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:26	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00094	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:26	MFF
Benzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:26	MFF
Bromobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:26	MFF
Bromochloromethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:26	MFF
Bromodichloromethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:26	MFF
Bromoform	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:26	MFF
Bromomethane	ND	0.0094	mg/Kg dry	1	V-34	SW-846 8260C	3/13/19	3/14/19 0:26	MFF
2-Butanone (MEK)	ND	0.037	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:26	MFF
n-Butylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:26	MFF
sec-Butylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:26	MFF
tert-Butylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:26	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00094	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:26	MFF
Carbon Disulfide	ND	0.0056	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:26	MFF
Carbon Tetrachloride	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:26	MFF
Chlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:26	MFF
Chlorodibromomethane	ND	0.00094	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:26	MFF
Chloroethane	ND	0.0094	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:26	MFF
Chloroform	ND	0.0037	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:26	MFF
Chloromethane	ND	0.0094	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:26	MFF
2-Chlorotoluene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:26	MFF
4-Chlorotoluene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:26	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0037	mg/Kg dry	1	V-05	SW-846 8260C	3/13/19	3/14/19 0:26	MFF
1,2-Dibromoethane (EDB)	ND	0.00094	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:26	MFF
Dibromomethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:26	MFF
1,2-Dichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:26	MFF
1,3-Dichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:26	MFF
1,4-Dichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:26	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0094	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:26	MFF
1,1-Dichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:26	MFF
1,2-Dichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:26	MFF
1,1-Dichloroethylene	ND	0.0037	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:26	MFF
cis-1,2-Dichloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:26	MFF
trans-1,2-Dichloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:26	MFF
1,2-Dichloropropane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:26	MFF
1,3-Dichloropropane	ND	0.00094	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:26	MFF
2,2-Dichloropropane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:26	MFF
1,1-Dichloropropene	ND	0.0037	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:26	MFF
cis-1,3-Dichloropropene	ND	0.00094	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:26	MFF
trans-1,3-Dichloropropene	ND	0.00094	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:26	MFF
Diethyl Ether	ND	0.0094	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:26	MFF
Diisopropyl Ether (DIPE)	ND	0.00094	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:26	MFF
1,4-Dioxane	ND	0.19	mg/Kg dry	1	V-16	SW-846 8260C	3/13/19	3/14/19 0:26	MFF
Ethylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:26	MFF

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-B3 (0-5)

Sampled: 3/11/2019 14:45

Sample ID: 19C0442-27

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:26	MFF
2-Hexanone (MBK)	ND	0.019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:26	MFF
Isopropylbenzene (Cumene)	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:26	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:26	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0037	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:26	MFF
Methylene Chloride	ND	0.0094	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:26	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:26	MFF
Naphthalene	ND	0.0037	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:26	MFF
n-Propylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:26	MFF
Styrene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:26	MFF
1,1,1,2-Tetrachloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:26	MFF
1,1,2,2-Tetrachloroethane	ND	0.00094	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:26	MFF
Tetrachloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:26	MFF
Tetrahydrofuran	ND	0.0094	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:26	MFF
Toluene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:26	MFF
1,2,3-Trichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:26	MFF
1,2,4-Trichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:26	MFF
1,1,1-Trichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:26	MFF
1,1,2-Trichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:26	MFF
Trichloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:26	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0094	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:26	MFF
1,2,3-Trichloropropane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:26	MFF
1,2,4-Trimethylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:26	MFF
1,3,5-Trimethylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:26	MFF
Vinyl Chloride	ND	0.0094	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:26	MFF
m+p Xylene	ND	0.0037	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:26	MFF
o-Xylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:26	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	87.4	70-130	
Toluene-d8	98.3	70-130	
4-Bromofluorobenzene	101	70-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-B3 (0-5)

Sampled: 3/11/2019 14:45

Sample ID: 19C0442-27

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatle Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.76	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 17:24	IMR
Acenaphthylene	ND	0.76	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 17:24	IMR
Acetophenone	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 17:24	IMR
Aniline	ND	1.5	mg/Kg dry	4	V-34	SW-846 8270D	3/14/19	3/15/19 17:24	IMR
Anthracene	0.76	0.76	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 17:24	IMR
Benzo(a)anthracene	1.8	0.76	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 17:24	IMR
Benzo(a)pyrene	1.7	0.76	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 17:24	IMR
Benzo(b)fluoranthene	2.0	0.76	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 17:24	IMR
Benzo(g,h,i)perylene	1.1	0.76	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 17:24	IMR
Benzo(k)fluoranthene	ND	0.76	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 17:24	IMR
Bis(2-chloroethoxy)methane	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 17:24	IMR
Bis(2-chloroethyl)ether	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 17:24	IMR
Bis(2-chloroisopropyl)ether	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 17:24	IMR
Bis(2-Ethylhexyl)phthalate	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 17:24	IMR
4-Bromophenylphenylether	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 17:24	IMR
Butylbenzylphthalate	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 17:24	IMR
4-Chloroaniline	ND	2.9	mg/Kg dry	4	V-34	SW-846 8270D	3/14/19	3/15/19 17:24	IMR
2-Chloronaphthalene	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 17:24	IMR
2-Chlorophenol	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 17:24	IMR
Chrysene	1.7	0.76	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 17:24	IMR
Dibenz(a,h)anthracene	ND	0.76	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 17:24	IMR
Dibenzofuran	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 17:24	IMR
Di-n-butylphthalate	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 17:24	IMR
1,2-Dichlorobenzene	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 17:24	IMR
1,3-Dichlorobenzene	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 17:24	IMR
1,4-Dichlorobenzene	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 17:24	IMR
3,3-Dichlorobenzidine	ND	0.76	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 17:24	IMR
2,4-Dichlorophenol	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 17:24	IMR
Diethylphthalate	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 17:24	IMR
2,4-Dimethylphenol	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 17:24	IMR
Dimethylphthalate	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 17:24	IMR
2,4-Dinitrophenol	ND	2.9	mg/Kg dry	4	V-05	SW-846 8270D	3/14/19	3/15/19 17:24	IMR
2,4-Dinitrotoluene	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 17:24	IMR
2,6-Dinitrotoluene	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 17:24	IMR
Di-n-octylphthalate	ND	1.5	mg/Kg dry	4	V-20	SW-846 8270D	3/14/19	3/15/19 17:24	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 17:24	IMR
Fluoranthene	3.9	0.76	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 17:24	IMR
Fluorene	ND	0.76	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 17:24	IMR
Hexachlorobenzene	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 17:24	IMR
Hexachlorobutadiene	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 17:24	IMR
Hexachloroethane	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 17:24	IMR
Indeno(1,2,3-cd)pyrene	1.2	0.76	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 17:24	IMR
Isophorone	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 17:24	IMR
2-Methylnaphthalene	ND	0.76	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 17:24	IMR

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-B3 (0-5)

Sampled: 3/11/2019 14:45

Sample ID: 19C0442-27

Sample Matrix: Soil

Sample Flags: RL-08

**Semivolatile Organic Compounds by GC/MS**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 17:24	IMR
3/4-Methylphenol	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 17:24	IMR
Naphthalene	ND	0.76	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 17:24	IMR
Nitrobenzene	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 17:24	IMR
2-Nitrophenol	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 17:24	IMR
4-Nitrophenol	ND	2.9	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 17:24	IMR
Pentachlorophenol	ND	1.5	mg/Kg dry	4	V-05	SW-846 8270D	3/14/19	3/15/19 17:24	IMR
Phenanthrene	3.1	0.76	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 17:24	IMR
Phenol	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 17:24	IMR
Pyrene	3.8	0.76	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 17:24	IMR
1,2,4-Trichlorobenzene	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 17:24	IMR
2,4,5-Trichlorophenol	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 17:24	IMR
2,4,6-Trichlorophenol	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 17:24	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	79.7	30-130	
Phenol-d6	85.2	30-130	
Nitrobenzene-d5	88.1	30-130	
2-Fluorobiphenyl	78.9	30-130	
2,4,6-Tribromophenol	77.3	30-130	
p-Terphenyl-d14	97.6	30-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-B3 (0-5)

Sampled: 3/11/2019 14:45

Sample ID: 19C0442-27

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 14:17	TG
Aroclor-1221 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 14:17	TG
Aroclor-1232 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 14:17	TG
Aroclor-1242 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 14:17	TG
Aroclor-1248 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 14:17	TG
Aroclor-1254 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 14:17	TG
Aroclor-1260 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 14:17	TG
Aroclor-1262 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 14:17	TG
Aroclor-1268 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 14:17	TG
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		91.8	30-150					3/18/19 14:17	
Decachlorobiphenyl [2]		90.3	30-150					3/18/19 14:17	
Tetrachloro-m-xylene [1]		104	30-150					3/18/19 14:17	
Tetrachloro-m-xylene [2]		100	30-150					3/18/19 14:17	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-B3 (0-5)

Sampled: 3/11/2019 14:45

Sample ID: 19C0442-27

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	1000	460	mg/Kg dry	50		SW-846 8100 Modified	3/14/19	3/16/19 6:57	KLB
<b>Surrogates</b>		<b>% Recovery</b>	<b>Recovery Limits</b>		<b>Flag/Qual</b>				
2-Fluorobiphenyl		*	40-140		S-01			3/16/19 6:57	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-B3 (0-5)

Sampled: 3/11/2019 14:45

Sample ID: 19C0442-27

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.8	mg/Kg dry	1	MS-07	SW-846 6010D	3/13/19	3/14/19 15:27	QNW
Arsenic	6.0	1.8	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:27	QNW
Barium	32	1.8	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:27	QNW
Beryllium	0.32	0.18	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:27	QNW
Cadmium	0.41	0.18	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:27	QNW
Chromium	15	0.37	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:27	QNW
Lead	60	0.55	mg/Kg dry	1	M-10	SW-846 6010D	3/13/19	3/14/19 15:27	QNW
Mercury	0.036	0.028	mg/Kg dry	1		SW-846 7471B	3/13/19	3/14/19 14:24	TBC
Nickel	12	0.37	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:27	QNW
Selenium	ND	3.7	mg/Kg dry	1	MS-07	SW-846 6010D	3/13/19	3/14/19 15:27	QNW
Silver	ND	0.37	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:27	QNW
Thallium	ND	1.8	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:27	QNW
Vanadium	21	0.73	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:27	QNW
Zinc	51	0.73	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 15:27	QNW

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-B3 (0-5)

Sampled: 3/11/2019 14:45

Sample ID: 19C0442-27

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	89.6		% Wt	1		SM 2540G	3/18/19	3/18/19 15:55	VLH
Ignitability	Absent		present/absent	1		SW-846 1030	3/14/19	3/14/19 11:10	KMV
pH @18.5°C	7.8		pH Units	1	H-03	SW-846 9045C	3/13/19	3/13/19 10:50	IS
Reactive Cyanide	ND	4.0	mg/Kg	1		SW-846 9014	3/14/19	3/15/19 11:07	KMV
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	3/14/19	3/15/19 10:28	KMV
Specific conductance	17	2.0	µmhos/cm	1		SM21-22 2510B Modified	3/14/19	3/14/19 12:49	EC



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-B3 (5-10)

Sampled: 3/11/2019 14:50

Sample ID: 19C0442-28

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.16	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:53	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:53	MFF
Benzene	ND	0.0031	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:53	MFF
Bromobenzene	ND	0.0031	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:53	MFF
Bromochloromethane	ND	0.0031	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:53	MFF
Bromodichloromethane	ND	0.0031	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:53	MFF
Bromoform	ND	0.0031	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:53	MFF
Bromomethane	ND	0.016	mg/Kg dry	1	V-34	SW-846 8260C	3/13/19	3/14/19 0:53	MFF
2-Butanone (MEK)	ND	0.063	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:53	MFF
n-Butylbenzene	ND	0.0031	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:53	MFF
sec-Butylbenzene	ND	0.0031	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:53	MFF
tert-Butylbenzene	ND	0.0031	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:53	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:53	MFF
Carbon Disulfide	ND	0.0094	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:53	MFF
Carbon Tetrachloride	ND	0.0031	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:53	MFF
Chlorobenzene	ND	0.0031	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:53	MFF
Chlorodibromomethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:53	MFF
Chloroethane	ND	0.016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:53	MFF
Chloroform	ND	0.0063	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:53	MFF
Chloromethane	ND	0.016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:53	MFF
2-Chlorotoluene	ND	0.0031	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:53	MFF
4-Chlorotoluene	ND	0.0031	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:53	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0063	mg/Kg dry	1	V-05	SW-846 8260C	3/13/19	3/14/19 0:53	MFF
1,2-Dibromoethane (EDB)	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:53	MFF
Dibromomethane	ND	0.0031	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:53	MFF
1,2-Dichlorobenzene	ND	0.0031	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:53	MFF
1,3-Dichlorobenzene	ND	0.0031	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:53	MFF
1,4-Dichlorobenzene	ND	0.0031	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:53	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:53	MFF
1,1-Dichloroethane	ND	0.0031	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:53	MFF
1,2-Dichloroethane	ND	0.0031	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:53	MFF
1,1-Dichloroethylene	ND	0.0063	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:53	MFF
cis-1,2-Dichloroethylene	ND	0.0031	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:53	MFF
trans-1,2-Dichloroethylene	ND	0.0031	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:53	MFF
1,2-Dichloropropane	ND	0.0031	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:53	MFF
1,3-Dichloropropane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:53	MFF
2,2-Dichloropropane	ND	0.0031	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:53	MFF
1,1-Dichloropropene	ND	0.0063	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:53	MFF
cis-1,3-Dichloropropene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:53	MFF
trans-1,3-Dichloropropene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:53	MFF
Diethyl Ether	ND	0.016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:53	MFF
Diisopropyl Ether (DIPE)	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:53	MFF
1,4-Dioxane	ND	0.31	mg/Kg dry	1	V-16	SW-846 8260C	3/13/19	3/14/19 0:53	MFF
Ethylbenzene	ND	0.0031	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:53	MFF

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-B3 (5-10)

Sampled: 3/11/2019 14:50

Sample ID: 19C0442-28

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0031	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:53	MFF
2-Hexanone (MBK)	ND	0.031	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:53	MFF
Isopropylbenzene (Cumene)	ND	0.0031	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:53	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0031	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:53	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0063	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:53	MFF
Methylene Chloride	ND	0.016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:53	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.031	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:53	MFF
Naphthalene	ND	0.0063	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:53	MFF
n-Propylbenzene	ND	0.0031	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:53	MFF
Styrene	ND	0.0031	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:53	MFF
1,1,1,2-Tetrachloroethane	ND	0.0031	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:53	MFF
1,1,2,2-Tetrachloroethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:53	MFF
Tetrachloroethylene	ND	0.0031	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:53	MFF
Tetrahydrofuran	ND	0.016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:53	MFF
Toluene	ND	0.0031	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:53	MFF
1,2,3-Trichlorobenzene	ND	0.0031	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:53	MFF
1,2,4-Trichlorobenzene	ND	0.0031	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:53	MFF
1,1,1-Trichloroethane	ND	0.0031	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:53	MFF
1,1,2-Trichloroethane	ND	0.0031	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:53	MFF
Trichloroethylene	ND	0.0031	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:53	MFF
Trichlorofluoromethane (Freon 11)	ND	0.016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:53	MFF
1,2,3-Trichloropropane	ND	0.0031	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:53	MFF
1,2,4-Trimethylbenzene	ND	0.0031	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:53	MFF
1,3,5-Trimethylbenzene	ND	0.0031	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:53	MFF
Vinyl Chloride	ND	0.016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:53	MFF
m+p Xylene	ND	0.0063	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:53	MFF
o-Xylene	ND	0.0031	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 0:53	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	88.6	70-130	
Toluene-d8	97.9	70-130	
4-Bromofluorobenzene	103	70-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-B3 (5-10)

Sampled: 3/11/2019 14:50

Sample ID: 19C0442-28

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatle Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.69	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 17:50	IMR
Acenaphthylene	ND	0.69	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 17:50	IMR
Acetophenone	ND	1.4	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 17:50	IMR
Aniline	ND	1.4	mg/Kg dry	2	V-34	SW-846 8270D	3/14/19	3/15/19 17:50	IMR
Anthracene	ND	0.69	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 17:50	IMR
Benzo(a)anthracene	ND	0.69	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 17:50	IMR
Benzo(a)pyrene	ND	0.69	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 17:50	IMR
Benzo(b)fluoranthene	ND	0.69	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 17:50	IMR
Benzo(g,h,i)perylene	ND	0.69	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 17:50	IMR
Benzo(k)fluoranthene	ND	0.69	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 17:50	IMR
Bis(2-chloroethoxy)methane	ND	1.4	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 17:50	IMR
Bis(2-chloroethyl)ether	ND	1.4	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 17:50	IMR
Bis(2-chloroisopropyl)ether	ND	1.4	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 17:50	IMR
Bis(2-Ethylhexyl)phthalate	ND	1.4	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 17:50	IMR
4-Bromophenylphenylether	ND	1.4	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 17:50	IMR
Butylbenzylphthalate	ND	1.4	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 17:50	IMR
4-Chloroaniline	ND	2.7	mg/Kg dry	2	V-34	SW-846 8270D	3/14/19	3/15/19 17:50	IMR
2-Chloronaphthalene	ND	1.4	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 17:50	IMR
2-Chlorophenol	ND	1.4	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 17:50	IMR
Chrysene	ND	0.69	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 17:50	IMR
Dibenz(a,h)anthracene	ND	0.69	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 17:50	IMR
Dibenzofuran	ND	1.4	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 17:50	IMR
Di-n-butylphthalate	ND	1.4	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 17:50	IMR
1,2-Dichlorobenzene	ND	1.4	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 17:50	IMR
1,3-Dichlorobenzene	ND	1.4	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 17:50	IMR
1,4-Dichlorobenzene	ND	1.4	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 17:50	IMR
3,3-Dichlorobenzidine	ND	0.69	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 17:50	IMR
2,4-Dichlorophenol	ND	1.4	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 17:50	IMR
Diethylphthalate	ND	1.4	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 17:50	IMR
2,4-Dimethylphenol	ND	1.4	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 17:50	IMR
Dimethylphthalate	ND	1.4	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 17:50	IMR
2,4-Dinitrophenol	ND	2.7	mg/Kg dry	2	V-05	SW-846 8270D	3/14/19	3/15/19 17:50	IMR
2,4-Dinitrotoluene	ND	1.4	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 17:50	IMR
2,6-Dinitrotoluene	ND	1.4	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 17:50	IMR
Di-n-octylphthalate	ND	1.4	mg/Kg dry	2	V-20	SW-846 8270D	3/14/19	3/15/19 17:50	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	1.4	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 17:50	IMR
Fluoranthene	ND	0.69	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 17:50	IMR
Fluorene	ND	0.69	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 17:50	IMR
Hexachlorobenzene	ND	1.4	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 17:50	IMR
Hexachlorobutadiene	ND	1.4	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 17:50	IMR
Hexachloroethane	ND	1.4	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 17:50	IMR
Indeno(1,2,3-cd)pyrene	ND	0.69	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 17:50	IMR
Isophorone	ND	1.4	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 17:50	IMR
2-Methylnaphthalene	ND	0.69	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 17:50	IMR

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-B3 (5-10)

Sampled: 3/11/2019 14:50

Sample ID: 19C0442-28

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	1.4	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 17:50	IMR
3/4-Methylphenol	ND	1.4	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 17:50	IMR
Naphthalene	ND	0.69	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 17:50	IMR
Nitrobenzene	ND	1.4	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 17:50	IMR
2-Nitrophenol	ND	1.4	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 17:50	IMR
4-Nitrophenol	ND	2.7	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 17:50	IMR
Pentachlorophenol	ND	1.4	mg/Kg dry	2	V-05	SW-846 8270D	3/14/19	3/15/19 17:50	IMR
Phenanthrene	ND	0.69	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 17:50	IMR
Phenol	ND	1.4	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 17:50	IMR
Pyrene	0.82	0.69	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 17:50	IMR
1,2,4-Trichlorobenzene	ND	1.4	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 17:50	IMR
2,4,5-Trichlorophenol	ND	1.4	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 17:50	IMR
2,4,6-Trichlorophenol	ND	1.4	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 17:50	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	72.0	30-130	
Phenol-d6	78.2	30-130	
Nitrobenzene-d5	77.1	30-130	
2-Fluorobiphenyl	61.6	30-130	
2,4,6-Tribromophenol	78.5	30-130	
p-Terphenyl-d14	77.7	30-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-B3 (5-10)

Sampled: 3/11/2019 14:50

Sample ID: 19C0442-28

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.16	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 14:34	TG
Aroclor-1221 [1]	ND	0.16	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 14:34	TG
Aroclor-1232 [1]	ND	0.16	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 14:34	TG
Aroclor-1242 [1]	ND	0.16	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 14:34	TG
Aroclor-1248 [1]	ND	0.16	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 14:34	TG
Aroclor-1254 [1]	ND	0.16	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 14:34	TG
Aroclor-1260 [1]	ND	0.16	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 14:34	TG
Aroclor-1262 [1]	ND	0.16	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 14:34	TG
Aroclor-1268 [1]	ND	0.16	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 14:34	TG
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		79.8	30-150					3/18/19 14:34	
Decachlorobiphenyl [2]		76.3	30-150					3/18/19 14:34	
Tetrachloro-m-xylene [1]		94.5	30-150					3/18/19 14:34	
Tetrachloro-m-xylene [2]		93.4	30-150					3/18/19 14:34	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-B3 (5-10)

Sampled: 3/11/2019 14:50

Sample ID: 19C0442-28

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	690	340	mg/Kg dry	20		SW-846 8100 Modified	3/14/19	3/16/19 7:17	KLB
<b>Surrogates</b>		<b>% Recovery</b>	<b>Recovery Limits</b>		<b>Flag/Qual</b>				
2-Fluorobiphenyl		*	40-140		S-01			3/16/19 7:17	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-B3 (5-10)

Sampled: 3/11/2019 14:50

Sample ID: 19C0442-28

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	3.4	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 16:12	QNW
Arsenic	19	3.4	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 16:12	QNW
Barium	58	3.4	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 16:12	QNW
Beryllium	0.44	0.34	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 16:12	QNW
Cadmium	1.2	0.34	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 16:12	QNW
Chromium	24	0.68	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 16:12	QNW
Lead	87	1.0	mg/Kg dry	1	M-10	SW-846 6010D	3/13/19	3/14/19 16:12	QNW
Mercury	ND	0.049	mg/Kg dry	1		SW-846 7471B	3/13/19	3/14/19 14:25	TBC
Nickel	19	0.68	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 16:12	QNW
Selenium	ND	6.8	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 16:12	QNW
Silver	ND	0.68	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 15:06	QNW
Thallium	ND	3.4	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 16:12	QNW
Vanadium	38	1.4	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 16:12	QNW
Zinc	82	1.4	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 16:12	QNW

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19C0442

Date Received: 3/12/2019

Field Sample #: TP-B3 (5-10)

Sampled: 3/11/2019 14:50

Sample ID: 19C0442-28

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	48.6		% Wt	1		SM 2540G	3/18/19	3/18/19 15:55	VLH
Ignitability	Absent		present/absent	1		SW-846 1030	3/14/19	3/14/19 11:10	KMV
pH @19°C	7.1		pH Units	1	H-03	SW-846 9045C	3/13/19	3/13/19 10:50	IS
Reactive Cyanide	ND	4.0	mg/Kg	1		SW-846 9014	3/14/19	3/15/19 11:07	KMV
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	3/14/19	3/15/19 10:28	KMV
Specific conductance	17	2.0	µmhos/cm	1		SM21-22 2510B Modified	3/14/19	3/14/19 12:49	EC



**Sample Extraction Data**

**Prep Method: % Solids-SM 2540G**

Lab Number [Field ID]	Batch	Date
19C0442-01 [TP-D7 (0-5)]	B225948	03/18/19
19C0442-02 [TP-D7 (5-10)]	B225948	03/18/19
19C0442-03 [TP-D6 (0-5)]	B225948	03/18/19
19C0442-04 [TP-D6 (5-10)]	B225948	03/18/19
19C0442-05 [TP-C6 (0-5)]	B225948	03/18/19
19C0442-06 [TP-C6 (5-10)]	B225948	03/18/19
19C0442-07 [TP-B6 (0-5)]	B225948	03/18/19
19C0442-08 [TP-B6 (5-10)]	B225948	03/18/19
19C0442-09 [TP-B5 (0-5)]	B225948	03/18/19
19C0442-10 [TP-B5 (5-10)]	B225948	03/18/19
19C0442-11 [TP-C5 (0-5)]	B225948	03/18/19
19C0442-12 [TP-C5 (5-10)]	B225948	03/18/19
19C0442-13 [TP-D5 (0-5)]	B225948	03/18/19
19C0442-14 [TP-D5 (5-10)]	B225948	03/18/19
19C0442-15 [TP-D4 (0-5)]	B225948	03/18/19
19C0442-16 [TP-D4 (5-10)]	B225948	03/18/19
19C0442-17 [TP-C4 (0-5)]	B225948	03/18/19
19C0442-18 [TP-C4 (5-10)]	B225948	03/18/19
19C0442-19 [TP-B4 (0-5)]	B225948	03/18/19
19C0442-20 [TP-B4 (5-10)]	B225948	03/18/19
19C0442-21 [TP-A5 (0-5)]	B225948	03/18/19
19C0442-22 [TP-A5 (5-10)]	B225948	03/18/19
19C0442-23 [TP-A4 (0-5)]	B225948	03/18/19
19C0442-24 [TP-A4 (5-10)]	B225948	03/18/19
19C0442-25 [TP-A3 (0-5)]	B225948	03/18/19
19C0442-26 [TP-A3 (5-10)]	B225948	03/18/19
19C0442-27 [TP-B3 (0-5)]	B225948	03/18/19
19C0442-28 [TP-B3 (5-10)]	B225948	03/18/19

**SM21-22 2510B**

Lab Number [Field ID]	Batch	Initial [mL]	Date
19C0442-01 [TP-D7 (0-5)]	B225597	100	03/13/19
19C0442-02 [TP-D7 (5-10)]	B225597	100	03/13/19
19C0442-03 [TP-D6 (0-5)]	B225597	100	03/13/19
19C0442-04 [TP-D6 (5-10)]	B225597	100	03/13/19
19C0442-05 [TP-C6 (0-5)]	B225597	100	03/13/19
19C0442-06 [TP-C6 (5-10)]	B225597	100	03/13/19
19C0442-07 [TP-B6 (0-5)]	B225597	100	03/13/19
19C0442-08 [TP-B6 (5-10)]	B225597	100	03/13/19
19C0442-09 [TP-B5 (0-5)]	B225597	100	03/13/19
19C0442-10 [TP-B5 (5-10)]	B225597	100	03/13/19
19C0442-11 [TP-C5 (0-5)]	B225597	100	03/13/19
19C0442-12 [TP-C5 (5-10)]	B225597	100	03/13/19
19C0442-13 [TP-D5 (0-5)]	B225597	100	03/13/19
19C0442-14 [TP-D5 (5-10)]	B225597	100	03/13/19
19C0442-15 [TP-D4 (0-5)]	B225597	100	03/13/19
19C0442-16 [TP-D4 (5-10)]	B225597	100	03/13/19
19C0442-17 [TP-C4 (0-5)]	B225597	100	03/13/19
19C0442-18 [TP-C4 (5-10)]	B225597	100	03/13/19
19C0442-19 [TP-B4 (0-5)]	B225597	100	03/13/19

**Sample Extraction Data**

**SM21-22 2510B Modified**

Lab Number [Field ID]	Batch	Initial [g]	Date
19C0442-20 [TP-B4 (5-10)]	B225720	1.00	03/14/19
19C0442-21 [TP-A5 (0-5)]	B225720	1.00	03/14/19
19C0442-22 [TP-A5 (5-10)]	B225720	1.00	03/14/19
19C0442-23 [TP-A4 (0-5)]	B225720	1.00	03/14/19
19C0442-24 [TP-A4 (5-10)]	B225720	1.00	03/14/19
19C0442-25 [TP-A3 (0-5)]	B225720	1.00	03/14/19
19C0442-26 [TP-A3 (5-10)]	B225720	1.00	03/14/19
19C0442-27 [TP-B3 (0-5)]	B225720	1.00	03/14/19
19C0442-28 [TP-B3 (5-10)]	B225720	1.00	03/14/19

**SW-846 1030**

Lab Number [Field ID]	Batch	Initial [g]	Date
19C0442-01 [TP-D7 (0-5)]	B225681	50.0	03/13/19
19C0442-02 [TP-D7 (5-10)]	B225681	50.0	03/13/19
19C0442-03 [TP-D6 (0-5)]	B225681	50.0	03/13/19
19C0442-04 [TP-D6 (5-10)]	B225681	50.0	03/13/19
19C0442-05 [TP-C6 (0-5)]	B225681	50.0	03/13/19
19C0442-06 [TP-C6 (5-10)]	B225681	50.0	03/13/19
19C0442-07 [TP-B6 (0-5)]	B225681	50.0	03/13/19
19C0442-08 [TP-B6 (5-10)]	B225681	50.0	03/13/19
19C0442-09 [TP-B5 (0-5)]	B225681	50.0	03/13/19
19C0442-10 [TP-B5 (5-10)]	B225681	50.0	03/13/19
19C0442-11 [TP-C5 (0-5)]	B225681	50.0	03/13/19
19C0442-12 [TP-C5 (5-10)]	B225681	50.0	03/13/19
19C0442-13 [TP-D5 (0-5)]	B225681	50.0	03/13/19
19C0442-14 [TP-D5 (5-10)]	B225681	50.0	03/13/19
19C0442-15 [TP-D4 (0-5)]	B225681	50.0	03/13/19
19C0442-16 [TP-D4 (5-10)]	B225681	50.0	03/13/19
19C0442-17 [TP-C4 (0-5)]	B225681	50.0	03/13/19
19C0442-18 [TP-C4 (5-10)]	B225681	50.0	03/13/19
19C0442-19 [TP-B4 (0-5)]	B225681	50.0	03/13/19
19C0442-20 [TP-B4 (5-10)]	B225681	50.0	03/13/19

**SW-846 1030**

Lab Number [Field ID]	Batch	Initial [g]	Date
19C0442-21 [TP-A5 (0-5)]	B225718	50.0	03/14/19
19C0442-22 [TP-A5 (5-10)]	B225718	50.0	03/14/19
19C0442-23 [TP-A4 (0-5)]	B225718	50.0	03/14/19
19C0442-24 [TP-A4 (5-10)]	B225718	50.0	03/14/19
19C0442-25 [TP-A3 (0-5)]	B225718	50.0	03/14/19
19C0442-26 [TP-A3 (5-10)]	B225718	50.0	03/14/19
19C0442-27 [TP-B3 (0-5)]	B225718	50.0	03/14/19
19C0442-28 [TP-B3 (5-10)]	B225718	50.0	03/14/19

**Prep Method: SW-846 3050B-SW-846 6010D**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C0442-01 [TP-D7 (0-5)]	B225671	1.50	50.0	03/13/19
19C0442-02 [TP-D7 (5-10)]	B225671	1.50	50.0	03/13/19

**Sample Extraction Data**

**Prep Method: SW-846 3050B-SW-846 6010D**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C0442-03 [TP-D6 (0-5)]	B225671	1.50	50.0	03/13/19
19C0442-04 [TP-D6 (5-10)]	B225671	1.50	50.0	03/13/19
19C0442-05 [TP-C6 (0-5)]	B225671	1.51	50.0	03/13/19
19C0442-06 [TP-C6 (5-10)]	B225671	1.53	50.0	03/13/19
19C0442-07 [TP-B6 (0-5)]	B225671	1.52	50.0	03/13/19
19C0442-08 [TP-B6 (5-10)]	B225671	1.50	50.0	03/13/19
19C0442-09 [TP-B5 (0-5)]	B225671	1.51	50.0	03/13/19
19C0442-10 [TP-B5 (5-10)]	B225671	1.53	50.0	03/13/19
19C0442-11 [TP-C5 (0-5)]	B225671	1.49	50.0	03/13/19
19C0442-12 [TP-C5 (5-10)]	B225671	1.49	50.0	03/13/19
19C0442-13 [TP-D5 (0-5)]	B225671	1.48	50.0	03/13/19
19C0442-14 [TP-D5 (5-10)]	B225671	1.53	50.0	03/13/19
19C0442-15 [TP-D4 (0-5)]	B225671	1.50	50.0	03/13/19
19C0442-16 [TP-D4 (5-10)]	B225671	1.50	50.0	03/13/19
19C0442-17 [TP-C4 (0-5)]	B225671	1.54	50.0	03/13/19
19C0442-18 [TP-C4 (5-10)]	B225671	1.54	50.0	03/13/19
19C0442-19 [TP-B4 (0-5)]	B225671	1.55	50.0	03/13/19
19C0442-20 [TP-B4 (5-10)]	B225671	1.49	50.0	03/13/19

**Prep Method: SW-846 3050B-SW-846 6010D**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C0442-21 [TP-A5 (0-5)]	B225677	1.54	50.0	03/13/19
19C0442-22 [TP-A5 (5-10)]	B225677	1.53	50.0	03/13/19
19C0442-23 [TP-A4 (0-5)]	B225677	1.52	50.0	03/13/19
19C0442-24 [TP-A4 (5-10)]	B225677	1.52	50.0	03/13/19
19C0442-25 [TP-A3 (0-5)]	B225677	1.51	50.0	03/13/19
19C0442-26 [TP-A3 (5-10)]	B225677	1.50	50.0	03/13/19
19C0442-27 [TP-B3 (0-5)]	B225677	1.52	50.0	03/13/19
19C0442-28 [TP-B3 (5-10)]	B225677	1.52	50.0	03/13/19

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C0442-01 [TP-D7 (0-5)]	B225633	0.594	50.0	03/13/19
19C0442-02 [TP-D7 (5-10)]	B225633	0.606	50.0	03/13/19
19C0442-03 [TP-D6 (0-5)]	B225633	0.597	50.0	03/13/19
19C0442-04 [TP-D6 (5-10)]	B225633	0.589	50.0	03/13/19
19C0442-05 [TP-C6 (0-5)]	B225633	0.631	50.0	03/13/19
19C0442-06 [TP-C6 (5-10)]	B225633	0.593	50.0	03/13/19
19C0442-07 [TP-B6 (0-5)]	B225633	0.580	50.0	03/13/19
19C0442-08 [TP-B6 (5-10)]	B225633	0.616	50.0	03/13/19
19C0442-09 [TP-B5 (0-5)]	B225633	0.605	50.0	03/13/19
19C0442-10 [TP-B5 (5-10)]	B225633	0.622	50.0	03/13/19
19C0442-11 [TP-C5 (0-5)]	B225633	0.589	50.0	03/13/19
19C0442-12 [TP-C5 (5-10)]	B225633	0.628	50.0	03/13/19
19C0442-13 [TP-D5 (0-5)]	B225633	0.583	50.0	03/13/19
19C0442-14 [TP-D5 (5-10)]	B225633	0.600	50.0	03/13/19
19C0442-15 [TP-D4 (0-5)]	B225633	0.620	50.0	03/13/19
19C0442-16 [TP-D4 (5-10)]	B225633	0.620	50.0	03/13/19
19C0442-17 [TP-C4 (0-5)]	B225633	0.588	50.0	03/13/19
19C0442-18 [TP-C4 (5-10)]	B225633	0.600	50.0	03/13/19
19C0442-19 [TP-B4 (0-5)]	B225633	0.623	50.0	03/13/19

**Sample Extraction Data**

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C0442-20 [TP-B4 (5-10)]	B225633	0.628	50.0	03/13/19

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C0442-21 [TP-A5 (0-5)]	B225636	0.607	50.0	03/13/19
19C0442-22 [TP-A5 (5-10)]	B225636	0.586	50.0	03/13/19
19C0442-23 [TP-A4 (0-5)]	B225636	0.620	50.0	03/13/19
19C0442-24 [TP-A4 (5-10)]	B225636	0.628	50.0	03/13/19
19C0442-25 [TP-A3 (0-5)]	B225636	0.581	50.0	03/13/19
19C0442-26 [TP-A3 (5-10)]	B225636	0.637	50.0	03/13/19
19C0442-27 [TP-B3 (0-5)]	B225636	0.591	50.0	03/13/19
19C0442-28 [TP-B3 (5-10)]	B225636	0.630	50.0	03/13/19

**Prep Method: SW-846 3540C-SW-846 8082A**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C0442-01 [TP-D7 (0-5)]	B225583	10.4	10.0	03/13/19
19C0442-02 [TP-D7 (5-10)]	B225583	10.0	10.0	03/13/19
19C0442-03 [TP-D6 (0-5)]	B225583	10.1	10.0	03/13/19
19C0442-04 [TP-D6 (5-10)]	B225583	10.6	10.0	03/13/19
19C0442-05 [TP-C6 (0-5)]	B225583	10.3	10.0	03/13/19
19C0442-06 [TP-C6 (5-10)]	B225583	10.5	10.0	03/13/19
19C0442-07 [TP-B6 (0-5)]	B225583	10.7	10.0	03/13/19
19C0442-08 [TP-B6 (5-10)]	B225583	10.3	10.0	03/13/19
19C0442-09 [TP-B5 (0-5)]	B225583	10.4	10.0	03/13/19
19C0442-10 [TP-B5 (5-10)]	B225583	10.4	10.0	03/13/19
19C0442-11 [TP-C5 (0-5)]	B225583	10.2	10.0	03/13/19
19C0442-12 [TP-C5 (5-10)]	B225583	10.2	10.0	03/13/19
19C0442-13 [TP-D5 (0-5)]	B225583	10.5	10.0	03/13/19
19C0442-14 [TP-D5 (5-10)]	B225583	10.5	10.0	03/13/19
19C0442-15 [TP-D4 (0-5)]	B225583	10.0	10.0	03/13/19
19C0442-16 [TP-D4 (5-10)]	B225583	10.0	10.0	03/13/19
19C0442-17 [TP-C4 (0-5)]	B225583	10.0	10.0	03/13/19
19C0442-18 [TP-C4 (5-10)]	B225583	10.0	10.0	03/13/19
19C0442-19 [TP-B4 (0-5)]	B225583	10.2	10.0	03/13/19
19C0442-20 [TP-B4 (5-10)]	B225583	10.4	10.0	03/13/19

**Prep Method: SW-846 3540C-SW-846 8082A**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C0442-21 [TP-A5 (0-5)]	B225713	10.4	10.0	03/14/19
19C0442-22 [TP-A5 (5-10)]	B225713	10.4	10.0	03/14/19
19C0442-23 [TP-A4 (0-5)]	B225713	10.6	10.0	03/14/19
19C0442-24 [TP-A4 (5-10)]	B225713	10.2	10.0	03/14/19
19C0442-25 [TP-A3 (0-5)]	B225713	10.1	10.0	03/14/19
19C0442-26 [TP-A3 (5-10)]	B225713	10.6	10.0	03/14/19
19C0442-27 [TP-B3 (0-5)]	B225713	10.7	10.0	03/14/19
19C0442-28 [TP-B3 (5-10)]	B225713	10.1	10.0	03/14/19

**Sample Extraction Data**

**Prep Method: SW-846 3546-SW-846 8100 Modified**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C0442-01 [TP-D7 (0-5)]	B225790	30.6	1.00	03/14/19
19C0442-02 [TP-D7 (5-10)]	B225790	30.7	1.00	03/14/19
19C0442-03 [TP-D6 (0-5)]	B225790	30.8	1.00	03/14/19
19C0442-04 [TP-D6 (5-10)]	B225790	30.4	1.00	03/14/19
19C0442-05 [TP-C6 (0-5)]	B225790	30.5	1.00	03/14/19
19C0442-06 [TP-C6 (5-10)]	B225790	30.5	1.00	03/14/19
19C0442-07 [TP-B6 (0-5)]	B225790	30.1	1.00	03/14/19
19C0442-08 [TP-B6 (5-10)]	B225790	30.5	1.00	03/14/19
19C0442-09 [TP-B5 (0-5)]	B225790	30.2	1.00	03/14/19
19C0442-10 [TP-B5 (5-10)]	B225790	30.2	1.00	03/14/19
19C0442-11 [TP-C5 (0-5)]	B225790	30.0	1.00	03/14/19
19C0442-12 [TP-C5 (5-10)]	B225790	30.3	1.00	03/14/19
19C0442-13 [TP-D5 (0-5)]	B225790	30.5	1.00	03/14/19
19C0442-14 [TP-D5 (5-10)]	B225790	30.3	1.00	03/14/19
19C0442-15 [TP-D4 (0-5)]	B225790	30.6	1.00	03/14/19
19C0442-16 [TP-D4 (5-10)]	B225790	30.6	1.00	03/14/19
19C0442-17 [TP-C4 (0-5)]	B225790	30.3	1.00	03/14/19
19C0442-18 [TP-C4 (5-10)]	B225790	30.2	1.00	03/14/19
19C0442-19 [TP-B4 (0-5)]	B225790	30.0	1.00	03/14/19
19C0442-20 [TP-B4 (5-10)]	B225790	30.5	1.00	03/14/19

**Prep Method: SW-846 3546-SW-846 8100 Modified**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C0442-21 [TP-A5 (0-5)]	B225791	30.5	1.00	03/14/19
19C0442-22 [TP-A5 (5-10)]	B225791	30.3	1.00	03/14/19
19C0442-23 [TP-A4 (0-5)]	B225791	30.8	1.00	03/14/19
19C0442-24 [TP-A4 (5-10)]	B225791	30.0	1.00	03/14/19
19C0442-25 [TP-A3 (0-5)]	B225791	30.2	1.00	03/14/19
19C0442-26 [TP-A3 (5-10)]	B225791	30.1	1.00	03/14/19
19C0442-27 [TP-B3 (0-5)]	B225791	30.0	1.00	03/14/19
19C0442-28 [TP-B3 (5-10)]	B225791	30.5	1.00	03/14/19

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C0442-01 [TP-D7 (0-5)]	B225643	6.47	10.0	03/13/19
19C0442-03 [TP-D6 (0-5)]	B225643	6.89	10.0	03/13/19
19C0442-04 [TP-D6 (5-10)]	B225643	6.77	10.0	03/13/19
19C0442-05 [TP-C6 (0-5)]	B225643	6.12	10.0	03/13/19
19C0442-06 [TP-C6 (5-10)]	B225643	6.49	10.0	03/13/19
19C0442-07 [TP-B6 (0-5)]	B225643	6.29	10.0	03/13/19
19C0442-08 [TP-B6 (5-10)]	B225643	5.60	10.0	03/13/19
19C0442-10 [TP-B5 (5-10)]	B225643	6.53	10.0	03/13/19
19C0442-11 [TP-C5 (0-5)]	B225643	6.68	10.0	03/13/19

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C0442-12 [TP-C5 (5-10)]	B225660	6.80	10.0	03/13/19
19C0442-13 [TP-D5 (0-5)]	B225660	5.19	10.0	03/13/19

**Sample Extraction Data**

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C0442-14 [TP-D5 (5-10)]	B225660	7.35	10.0	03/13/19
19C0442-15 [TP-D4 (0-5)]	B225660	9.16	10.0	03/13/19
19C0442-16 [TP-D4 (5-10)]	B225660	6.59	10.0	03/13/19
19C0442-17 [TP-C4 (0-5)]	B225660	6.98	10.0	03/13/19

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C0442-18 [TP-C4 (5-10)]	B225666	5.00	10.0	03/13/19
19C0442-19 [TP-B4 (0-5)]	B225666	6.35	10.0	03/13/19
19C0442-20 [TP-B4 (5-10)]	B225666	6.87	10.0	03/13/19
19C0442-21 [TP-A5 (0-5)]	B225666	5.55	10.0	03/13/19
19C0442-22 [TP-A5 (5-10)]	B225666	6.22	10.0	03/13/19
19C0442-23 [TP-A4 (0-5)]	B225666	7.30	10.0	03/13/19
19C0442-24 [TP-A4 (5-10)]	B225666	6.11	10.0	03/13/19
19C0442-25 [TP-A3 (0-5)]	B225666	6.30	10.0	03/13/19
19C0442-26 [TP-A3 (5-10)]	B225666	6.96	10.0	03/13/19
19C0442-27 [TP-B3 (0-5)]	B225666	5.96	10.0	03/13/19
19C0442-28 [TP-B3 (5-10)]	B225666	6.59	10.0	03/13/19

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C0442-02 [TP-D7 (5-10)]	B225708	7.47	10.0	03/13/19
19C0442-09 [TP-B5 (0-5)]	B225708	5.47	10.0	03/13/19

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C0442-01 [TP-D7 (0-5)]	B225792	30.6	1.00	03/14/19
19C0442-02 [TP-D7 (5-10)]	B225792	30.7	1.00	03/14/19
19C0442-03 [TP-D6 (0-5)]	B225792	30.8	1.00	03/14/19
19C0442-04 [TP-D6 (5-10)]	B225792	30.4	1.00	03/14/19
19C0442-05 [TP-C6 (0-5)]	B225792	30.5	1.00	03/14/19
19C0442-06 [TP-C6 (5-10)]	B225792	30.5	1.00	03/14/19
19C0442-06RE1 [TP-C6 (5-10)]	B225792	30.5	1.00	03/14/19
19C0442-07 [TP-B6 (0-5)]	B225792	30.1	1.00	03/14/19
19C0442-08 [TP-B6 (5-10)]	B225792	30.5	1.00	03/14/19
19C0442-09 [TP-B5 (0-5)]	B225792	30.2	1.00	03/14/19
19C0442-10 [TP-B5 (5-10)]	B225792	30.2	1.00	03/14/19
19C0442-11 [TP-C5 (0-5)]	B225792	30.0	1.00	03/14/19
19C0442-12 [TP-C5 (5-10)]	B225792	30.3	1.00	03/14/19
19C0442-13 [TP-D5 (0-5)]	B225792	30.5	1.00	03/14/19
19C0442-14 [TP-D5 (5-10)]	B225792	30.3	1.00	03/14/19
19C0442-15 [TP-D4 (0-5)]	B225792	30.6	1.00	03/14/19
19C0442-16 [TP-D4 (5-10)]	B225792	30.6	1.00	03/14/19
19C0442-17 [TP-C4 (0-5)]	B225792	30.3	1.00	03/14/19
19C0442-18 [TP-C4 (5-10)]	B225792	30.2	1.00	03/14/19
19C0442-19 [TP-B4 (0-5)]	B225792	30.0	1.00	03/14/19
19C0442-20 [TP-B4 (5-10)]	B225792	30.5	1.00	03/14/19

**Sample Extraction Data**

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C0442-21 [TP-A5 (0-5)]	B225793	30.5	1.00	03/14/19
19C0442-22 [TP-A5 (5-10)]	B225793	30.3	1.00	03/14/19
19C0442-23 [TP-A4 (0-5)]	B225793	30.8	1.00	03/14/19
19C0442-24 [TP-A4 (5-10)]	B225793	30.0	1.00	03/14/19
19C0442-25 [TP-A3 (0-5)]	B225793	30.2	1.00	03/14/19
19C0442-26 [TP-A3 (5-10)]	B225793	30.1	1.00	03/14/19
19C0442-27 [TP-B3 (0-5)]	B225793	30.0	1.00	03/14/19
19C0442-28 [TP-B3 (5-10)]	B225793	30.5	1.00	03/14/19

**SW-846 9014**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C0442-01 [TP-D7 (0-5)]	B225626	25.2	250	03/13/19
19C0442-02 [TP-D7 (5-10)]	B225626	25.1	250	03/13/19
19C0442-03 [TP-D6 (0-5)]	B225626	25.5	250	03/13/19
19C0442-04 [TP-D6 (5-10)]	B225626	25.1	250	03/13/19
19C0442-05 [TP-C6 (0-5)]	B225626	25.3	250	03/13/19
19C0442-06 [TP-C6 (5-10)]	B225626	25.1	250	03/13/19
19C0442-07 [TP-B6 (0-5)]	B225626	25.3	250	03/13/19
19C0442-08 [TP-B6 (5-10)]	B225626	25.3	250	03/13/19
19C0442-09 [TP-B5 (0-5)]	B225626	25.0	250	03/13/19
19C0442-10 [TP-B5 (5-10)]	B225626	25.3	250	03/13/19
19C0442-11 [TP-C5 (0-5)]	B225626	25.1	250	03/13/19
19C0442-12 [TP-C5 (5-10)]	B225626	25.4	250	03/13/19
19C0442-13 [TP-D5 (0-5)]	B225626	25.1	250	03/13/19
19C0442-14 [TP-D5 (5-10)]	B225626	25.1	250	03/13/19
19C0442-15 [TP-D4 (0-5)]	B225626	25.3	250	03/13/19
19C0442-16 [TP-D4 (5-10)]	B225626	25.4	250	03/13/19
19C0442-17 [TP-C4 (0-5)]	B225626	25.4	250	03/13/19
19C0442-18 [TP-C4 (5-10)]	B225626	25.4	250	03/13/19

**SW-846 9014**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C0442-24 [TP-A4 (5-10)]	B225772	25.2	250	03/14/19
19C0442-26 [TP-A3 (5-10)]	B225772	25.0	250	03/14/19
19C0442-27 [TP-B3 (0-5)]	B225772	25.2	250	03/14/19
19C0442-28 [TP-B3 (5-10)]	B225772	25.3	250	03/14/19

**SW-846 9014**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C0442-19 [TP-B4 (0-5)]	B225873	25.2	250	03/15/19
19C0442-20 [TP-B4 (5-10)]	B225873	25.5	250	03/15/19
19C0442-21 [TP-A5 (0-5)]	B225873	25.4	250	03/15/19
19C0442-22 [TP-A5 (5-10)]	B225873	25.3	250	03/15/19
19C0442-23 [TP-A4 (0-5)]	B225873	25.5	250	03/15/19
19C0442-25 [TP-A3 (0-5)]	B225873	25.6	250	03/15/19

**Sample Extraction Data**

**SW-846 9030A**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C0442-01 [TP-D7 (0-5)]	B225627	25.2	250	03/13/19
19C0442-02 [TP-D7 (5-10)]	B225627	25.1	250	03/13/19
19C0442-03 [TP-D6 (0-5)]	B225627	25.5	250	03/13/19
19C0442-04 [TP-D6 (5-10)]	B225627	25.1	250	03/13/19
19C0442-05 [TP-C6 (0-5)]	B225627	25.3	250	03/13/19
19C0442-06 [TP-C6 (5-10)]	B225627	25.1	250	03/13/19
19C0442-07 [TP-B6 (0-5)]	B225627	25.3	250	03/13/19
19C0442-08 [TP-B6 (5-10)]	B225627	25.3	250	03/13/19
19C0442-09 [TP-B5 (0-5)]	B225627	25.0	250	03/13/19
19C0442-10 [TP-B5 (5-10)]	B225627	25.3	250	03/13/19
19C0442-11 [TP-C5 (0-5)]	B225627	25.1	250	03/13/19
19C0442-12 [TP-C5 (5-10)]	B225627	25.4	250	03/13/19
19C0442-13 [TP-D5 (0-5)]	B225627	25.1	250	03/13/19
19C0442-14 [TP-D5 (5-10)]	B225627	25.1	250	03/13/19
19C0442-15 [TP-D4 (0-5)]	B225627	25.3	250	03/13/19
19C0442-16 [TP-D4 (5-10)]	B225627	25.4	250	03/13/19
19C0442-17 [TP-C4 (0-5)]	B225627	25.4	250	03/13/19
19C0442-18 [TP-C4 (5-10)]	B225627	25.4	250	03/13/19

**SW-846 9030A**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C0442-24 [TP-A4 (5-10)]	B225773	25.2	250	03/14/19
19C0442-26 [TP-A3 (5-10)]	B225773	25.0	250	03/14/19
19C0442-27 [TP-B3 (0-5)]	B225773	25.2	250	03/14/19
19C0442-28 [TP-B3 (5-10)]	B225773	25.3	250	03/14/19

**SW-846 9030A**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C0442-19 [TP-B4 (0-5)]	B225875	25.2	250	03/15/19
19C0442-20 [TP-B4 (5-10)]	B225875	25.5	250	03/15/19
19C0442-21 [TP-A5 (0-5)]	B225875	25.4	250	03/15/19
19C0442-22 [TP-A5 (5-10)]	B225875	25.3	250	03/15/19
19C0442-23 [TP-A4 (0-5)]	B225875	25.5	250	03/15/19
19C0442-25 [TP-A3 (0-5)]	B225875	25.6	250	03/15/19

**SW-846 9045C**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C0442-01 [TP-D7 (0-5)]	B225616	20.0		03/13/19
19C0442-02 [TP-D7 (5-10)]	B225616	20.0		03/13/19
19C0442-03 [TP-D6 (0-5)]	B225616	20.0		03/13/19
19C0442-04 [TP-D6 (5-10)]	B225616	20.0		03/13/19
19C0442-05 [TP-C6 (0-5)]	B225616	20.0		03/13/19
19C0442-06 [TP-C6 (5-10)]	B225616	20.0		03/13/19
19C0442-07 [TP-B6 (0-5)]	B225616	20.0		03/13/19
19C0442-08 [TP-B6 (5-10)]	B225616	20.0		03/13/19
19C0442-09 [TP-B5 (0-5)]	B225616	20.0		03/13/19
19C0442-10 [TP-B5 (5-10)]	B225616	20.0		03/13/19
19C0442-11 [TP-C5 (0-5)]	B225616	20.0		03/13/19



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**Sample Extraction Data****SW-846 9045C**

<b>Lab Number [Field ID]</b>	<b>Batch</b>	<b>Initial [g]</b>	<b>Date</b>
19C0442-12 [TP-C5 (5-10)]	B225616	20.0	03/13/19
19C0442-13 [TP-D5 (0-5)]	B225616	20.0	03/13/19
19C0442-14 [TP-D5 (5-10)]	B225616	20.0	03/13/19
19C0442-15 [TP-D4 (0-5)]	B225616	20.0	03/13/19
19C0442-16 [TP-D4 (5-10)]	B225616	20.0	03/13/19
19C0442-17 [TP-C4 (0-5)]	B225616	20.0	03/13/19
19C0442-18 [TP-C4 (5-10)]	B225616	20.0	03/13/19
19C0442-19 [TP-B4 (0-5)]	B225616	20.0	03/13/19
19C0442-20 [TP-B4 (5-10)]	B225616	20.0	03/13/19

**SW-846 9045C**

<b>Lab Number [Field ID]</b>	<b>Batch</b>	<b>Initial [g]</b>	<b>Date</b>
19C0442-21 [TP-A5 (0-5)]	B225617	20.0	03/13/19
19C0442-22 [TP-A5 (5-10)]	B225617	20.0	03/13/19
19C0442-23 [TP-A4 (0-5)]	B225617	20.0	03/13/19
19C0442-24 [TP-A4 (5-10)]	B225617	20.0	03/13/19
19C0442-25 [TP-A3 (0-5)]	B225617	20.0	03/13/19
19C0442-26 [TP-A3 (5-10)]	B225617	20.0	03/13/19
19C0442-27 [TP-B3 (0-5)]	B225617	20.0	03/13/19
19C0442-28 [TP-B3 (5-10)]	B225617	20.0	03/13/19

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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 B225643 - SW-846 5035**

**Blank (B225643-BLK1)**

Prepared & Analyzed: 03/13/19

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							
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							
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							R-05
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 B225643 - SW-846 5035**

**Blank (B225643-BLK1)**

Prepared & Analyzed: 03/13/19

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	0.0502		mg/Kg wet	0.0500		100	70-130			
Surrogate: Toluene-d8	0.0469		mg/Kg wet	0.0500		93.7	70-130			
Surrogate: 4-Bromofluorobenzene	0.0478		mg/Kg wet	0.0500		95.6	70-130			

**LCS (B225643-BS1)**

Prepared & Analyzed: 03/13/19

Acetone	0.202	0.10	mg/Kg wet	0.200		101	40-160			†
tert-Amyl Methyl Ether (TAME)	0.0190	0.0010	mg/Kg wet	0.0200		94.9	70-130			
Benzene	0.0171	0.0020	mg/Kg wet	0.0200		85.6	70-130			
Bromobenzene	0.0219	0.0020	mg/Kg wet	0.0200		109	70-130			
Bromochloromethane	0.0182	0.0020	mg/Kg wet	0.0200		91.2	70-130			
Bromodichloromethane	0.0196	0.0020	mg/Kg wet	0.0200		97.9	70-130			
Bromoform	0.0239	0.0020	mg/Kg wet	0.0200		120	70-130			
Bromomethane	0.0112	0.010	mg/Kg wet	0.0200		56.0	40-160		L-14, V-34	†
2-Butanone (MEK)	0.205	0.040	mg/Kg wet	0.200		103	40-160			†
n-Butylbenzene	0.0234	0.0020	mg/Kg wet	0.0200		117	70-130			
sec-Butylbenzene	0.0241	0.0020	mg/Kg wet	0.0200		120	70-130			
tert-Butylbenzene	0.0232	0.0020	mg/Kg wet	0.0200		116	70-130			
tert-Butyl Ethyl Ether (TBEE)	0.0179	0.0010	mg/Kg wet	0.0200		89.5	70-130			
Carbon Disulfide	0.0195	0.0060	mg/Kg wet	0.0200		97.4	70-130			
Carbon Tetrachloride	0.0193	0.0020	mg/Kg wet	0.0200		96.5	70-130			
Chlorobenzene	0.0219	0.0020	mg/Kg wet	0.0200		110	70-130			
Chlorodibromomethane	0.0212	0.0010	mg/Kg wet	0.0200		106	70-130			
Chloroethane	0.0186	0.010	mg/Kg wet	0.0200		92.9	70-130			
Chloroform	0.0178	0.0040	mg/Kg wet	0.0200		89.0	70-130			
Chloromethane	0.0129	0.010	mg/Kg wet	0.0200		64.3	40-160		L-14	†
2-Chlorotoluene	0.0223	0.0020	mg/Kg wet	0.0200		111	70-130			
4-Chlorotoluene	0.0220	0.0020	mg/Kg wet	0.0200		110	70-130			
1,2-Dibromo-3-chloropropane (DBCP)	0.0235	0.0020	mg/Kg wet	0.0200		117	70-130			
1,2-Dibromoethane (EDB)	0.0205	0.0010	mg/Kg wet	0.0200		102	70-130			
Dibromomethane	0.0199	0.0020	mg/Kg wet	0.0200		99.3	70-130			
1,2-Dichlorobenzene	0.0234	0.0020	mg/Kg wet	0.0200		117	70-130			
1,3-Dichlorobenzene	0.0238	0.0020	mg/Kg wet	0.0200		119	70-130			
1,4-Dichlorobenzene	0.0228	0.0020	mg/Kg wet	0.0200		114	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
<b>Batch B225643 - SW-846 5035</b>										
<b>LCS (B225643-BS1)</b>										
Prepared & Analyzed: 03/13/19										
Dichlorodifluoromethane (Freon 12)	0.0134	0.010	mg/Kg wet	0.0200		67.2	40-160			L-14 †
1,1-Dichloroethane	0.0177	0.0020	mg/Kg wet	0.0200		88.6	70-130			
1,2-Dichloroethane	0.0190	0.0020	mg/Kg wet	0.0200		94.9	70-130			
1,1-Dichloroethylene	0.0178	0.0040	mg/Kg wet	0.0200		88.9	70-130			
cis-1,2-Dichloroethylene	0.0175	0.0020	mg/Kg wet	0.0200		87.4	70-130			
trans-1,2-Dichloroethylene	0.0176	0.0020	mg/Kg wet	0.0200		88.1	70-130			
1,2-Dichloropropane	0.0186	0.0020	mg/Kg wet	0.0200		93.2	70-130			
1,3-Dichloropropane	0.0187	0.0010	mg/Kg wet	0.0200		93.6	70-130			
2,2-Dichloropropane	0.0173	0.0020	mg/Kg wet	0.0200		86.6	70-130			
1,1-Dichloropropene	0.0178	0.0020	mg/Kg wet	0.0200		88.8	70-130			
cis-1,3-Dichloropropene	0.0195	0.0010	mg/Kg wet	0.0200		97.3	70-130			
trans-1,3-Dichloropropene	0.0201	0.0010	mg/Kg wet	0.0200		100	70-130			
Diethyl Ether	0.0169	0.010	mg/Kg wet	0.0200		84.6	70-130			
Diisopropyl Ether (DIPE)	0.0180	0.0010	mg/Kg wet	0.0200		90.0	70-130			
1,4-Dioxane	0.230	0.10	mg/Kg wet	0.200		115	40-160			V-16 †
Ethylbenzene	0.0217	0.0020	mg/Kg wet	0.0200		108	70-130			
Hexachlorobutadiene	0.0248	0.0020	mg/Kg wet	0.0200		124	70-130			
2-Hexanone (MBK)	0.204	0.020	mg/Kg wet	0.200		102	40-160			†
Isopropylbenzene (Cumene)	0.0232	0.0020	mg/Kg wet	0.0200		116	70-130			
p-Isopropyltoluene (p-Cymene)	0.0232	0.0020	mg/Kg wet	0.0200		116	70-130			
Methyl tert-Butyl Ether (MTBE)	0.0171	0.0040	mg/Kg wet	0.0200		85.4	70-130			
Methylene Chloride	0.0193	0.010	mg/Kg wet	0.0200		96.4	70-130			R-05
4-Methyl-2-pentanone (MIBK)	0.203	0.020	mg/Kg wet	0.200		101	40-160			†
Naphthalene	0.0221	0.0040	mg/Kg wet	0.0200		111	70-130			
n-Propylbenzene	0.0225	0.0020	mg/Kg wet	0.0200		113	70-130			
Styrene	0.0216	0.0020	mg/Kg wet	0.0200		108	70-130			
1,1,1,2-Tetrachloroethane	0.0223	0.0020	mg/Kg wet	0.0200		112	70-130			
1,1,2,2-Tetrachloroethane	0.0223	0.0010	mg/Kg wet	0.0200		112	70-130			
Tetrachloroethylene	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130			
Tetrahydrofuran	0.0167	0.010	mg/Kg wet	0.0200		83.4	70-130			
Toluene	0.0191	0.0020	mg/Kg wet	0.0200		95.4	70-130			
1,2,3-Trichlorobenzene	0.0227	0.0020	mg/Kg wet	0.0200		114	70-130			
1,2,4-Trichlorobenzene	0.0222	0.0020	mg/Kg wet	0.0200		111	70-130			
1,1,1-Trichloroethane	0.0186	0.0020	mg/Kg wet	0.0200		93.1	70-130			
1,1,2-Trichloroethane	0.0198	0.0020	mg/Kg wet	0.0200		98.8	70-130			
Trichloroethylene	0.0186	0.0020	mg/Kg wet	0.0200		93.1	70-130			
Trichlorofluoromethane (Freon 11)	0.0169	0.010	mg/Kg wet	0.0200		84.5	70-130			
1,2,3-Trichloropropane	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130			
1,2,4-Trimethylbenzene	0.0218	0.0020	mg/Kg wet	0.0200		109	70-130			
1,3,5-Trimethylbenzene	0.0224	0.0020	mg/Kg wet	0.0200		112	70-130			
Vinyl Chloride	0.0142	0.010	mg/Kg wet	0.0200		71.2	70-130			
m+p Xylene	0.0441	0.0040	mg/Kg wet	0.0400		110	70-130			
o-Xylene	0.0218	0.0020	mg/Kg wet	0.0200		109	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0499		mg/Kg wet	0.0500		99.7	70-130			
Surrogate: Toluene-d8	0.0471		mg/Kg wet	0.0500		94.2	70-130			
Surrogate: 4-Bromofluorobenzene	0.0482		mg/Kg wet	0.0500		96.4	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
<b>Batch B225643 - SW-846 5035</b>										
<b>LCS Dup (B225643-BSD1)</b>										
Prepared & Analyzed: 03/13/19										
Acetone	0.194	0.10	mg/Kg wet	0.200		96.9	40-160	4.29	20	†
tert-Amyl Methyl Ether (TAME)	0.0184	0.0010	mg/Kg wet	0.0200		92.0	70-130	3.20	20	
Benzene	0.0165	0.0020	mg/Kg wet	0.0200		82.6	70-130	3.59	20	
Bromobenzene	0.0214	0.0020	mg/Kg wet	0.0200		107	70-130	2.11	20	
Bromochloromethane	0.0184	0.0020	mg/Kg wet	0.0200		92.0	70-130	0.885	20	
Bromodichloromethane	0.0190	0.0020	mg/Kg wet	0.0200		94.9	70-130	3.06	20	
Bromoform	0.0237	0.0020	mg/Kg wet	0.0200		119	70-130	0.697	20	
Bromomethane	0.0113	0.010	mg/Kg wet	0.0200		56.3	40-160	0.606	20	L-14, V-34 †
2-Butanone (MEK)	0.210	0.040	mg/Kg wet	0.200		105	40-160	2.15	20	†
n-Butylbenzene	0.0231	0.0020	mg/Kg wet	0.0200		116	70-130	1.16	20	
sec-Butylbenzene	0.0236	0.0020	mg/Kg wet	0.0200		118	70-130	2.09	20	
tert-Butylbenzene	0.0231	0.0020	mg/Kg wet	0.0200		115	70-130	0.683	20	
tert-Butyl Ethyl Ether (TBEE)	0.0181	0.0010	mg/Kg wet	0.0200		90.4	70-130	0.989	20	
Carbon Disulfide	0.0181	0.0060	mg/Kg wet	0.0200		90.6	70-130	7.19	20	
Carbon Tetrachloride	0.0186	0.0020	mg/Kg wet	0.0200		93.2	70-130	3.43	20	
Chlorobenzene	0.0217	0.0020	mg/Kg wet	0.0200		109	70-130	1.06	20	
Chlorodibromomethane	0.0213	0.0010	mg/Kg wet	0.0200		107	70-130	0.404	20	
Chloroethane	0.0179	0.010	mg/Kg wet	0.0200		89.4	70-130	3.87	20	
Chloroform	0.0176	0.0040	mg/Kg wet	0.0200		87.8	70-130	1.41	20	
Chloromethane	0.0128	0.010	mg/Kg wet	0.0200		63.8	40-160	0.875	20	L-14 †
2-Chlorotoluene	0.0221	0.0020	mg/Kg wet	0.0200		110	70-130	0.938	20	
4-Chlorotoluene	0.0218	0.0020	mg/Kg wet	0.0200		109	70-130	0.830	20	
1,2-Dibromo-3-chloropropane (DBCP)	0.0241	0.0020	mg/Kg wet	0.0200		120	70-130	2.52	20	
1,2-Dibromoethane (EDB)	0.0204	0.0010	mg/Kg wet	0.0200		102	70-130	0.303	20	
Dibromomethane	0.0201	0.0020	mg/Kg wet	0.0200		100	70-130	1.15	20	
1,2-Dichlorobenzene	0.0233	0.0020	mg/Kg wet	0.0200		116	70-130	0.463	20	
1,3-Dichlorobenzene	0.0232	0.0020	mg/Kg wet	0.0200		116	70-130	2.59	20	
1,4-Dichlorobenzene	0.0218	0.0020	mg/Kg wet	0.0200		109	70-130	4.53	20	
Dichlorodifluoromethane (Freon 12)	0.0136	0.010	mg/Kg wet	0.0200		68.0	40-160	1.21	20	L-14 †
1,1-Dichloroethane	0.0173	0.0020	mg/Kg wet	0.0200		86.7	70-130	2.13	20	
1,2-Dichloroethane	0.0188	0.0020	mg/Kg wet	0.0200		94.2	70-130	0.730	20	
1,1-Dichloroethylene	0.0173	0.0040	mg/Kg wet	0.0200		86.3	70-130	2.90	20	
cis-1,2-Dichloroethylene	0.0170	0.0020	mg/Kg wet	0.0200		85.2	70-130	2.48	20	
trans-1,2-Dichloroethylene	0.0172	0.0020	mg/Kg wet	0.0200		85.9	70-130	2.55	20	
1,2-Dichloropropane	0.0183	0.0020	mg/Kg wet	0.0200		91.5	70-130	1.78	20	
1,3-Dichloropropane	0.0184	0.0010	mg/Kg wet	0.0200		91.9	70-130	1.85	20	
2,2-Dichloropropane	0.0173	0.0020	mg/Kg wet	0.0200		86.7	70-130	0.0231	20	
1,1-Dichloropropene	0.0169	0.0020	mg/Kg wet	0.0200		84.7	70-130	4.77	20	
cis-1,3-Dichloropropene	0.0187	0.0010	mg/Kg wet	0.0200		93.6	70-130	3.91	20	
trans-1,3-Dichloropropene	0.0195	0.0010	mg/Kg wet	0.0200		97.5	70-130	2.82	20	
Diethyl Ether	0.0165	0.010	mg/Kg wet	0.0200		82.5	70-130	2.48	20	
Diisopropyl Ether (DIPE)	0.0176	0.0010	mg/Kg wet	0.0200		87.9	70-130	2.30	20	
1,4-Dioxane	0.212	0.10	mg/Kg wet	0.200		106	40-160	8.01	20	V-16 †
Ethylbenzene	0.0213	0.0020	mg/Kg wet	0.0200		107	70-130	1.56	20	
Hexachlorobutadiene	0.0252	0.0020	mg/Kg wet	0.0200		126	70-130	1.61	20	
2-Hexanone (MBK)	0.207	0.020	mg/Kg wet	0.200		103	40-160	1.11	20	†
Isopropylbenzene (Cumene)	0.0228	0.0020	mg/Kg wet	0.0200		114	70-130	1.76	20	
p-Isopropyltoluene (p-Cymene)	0.0231	0.0020	mg/Kg wet	0.0200		115	70-130	0.734	20	
Methyl tert-Butyl Ether (MTBE)	0.0183	0.0040	mg/Kg wet	0.0200		91.3	70-130	6.67	20	
Methylene Chloride	0.0148	0.010	mg/Kg wet	0.0200		74.2	70-130	26.0 *	20	R-05
4-Methyl-2-pentanone (MIBK)	0.203	0.020	mg/Kg wet	0.200		102	40-160	0.273	20	†
Naphthalene	0.0234	0.0040	mg/Kg wet	0.0200		117	70-130	5.82	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
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**Batch B225643 - SW-846 5035**

**LCS Dup (B225643-BSD1)**

Prepared & Analyzed: 03/13/19

n-Propylbenzene	0.0221	0.0020	mg/Kg wet	0.0200		110	70-130	2.05	20	
Styrene	0.0217	0.0020	mg/Kg wet	0.0200		109	70-130	0.443	20	
1,1,1,2-Tetrachloroethane	0.0220	0.0020	mg/Kg wet	0.0200		110	70-130	1.38	20	
1,1,2,2-Tetrachloroethane	0.0231	0.0010	mg/Kg wet	0.0200		116	70-130	3.43	20	
Tetrachloroethylene	0.0197	0.0020	mg/Kg wet	0.0200		98.5	70-130	2.59	20	
Tetrahydrofuran	0.0178	0.010	mg/Kg wet	0.0200		88.9	70-130	6.48	20	
Toluene	0.0185	0.0020	mg/Kg wet	0.0200		92.6	70-130	2.99	20	
1,2,3-Trichlorobenzene	0.0233	0.0020	mg/Kg wet	0.0200		116	70-130	2.41	20	
1,2,4-Trichlorobenzene	0.0230	0.0020	mg/Kg wet	0.0200		115	70-130	3.50	20	
1,1,1-Trichloroethane	0.0178	0.0020	mg/Kg wet	0.0200		89.0	70-130	4.47	20	
1,1,2-Trichloroethane	0.0198	0.0020	mg/Kg wet	0.0200		99.2	70-130	0.465	20	
Trichloroethylene	0.0183	0.0020	mg/Kg wet	0.0200		91.6	70-130	1.70	20	
Trichlorofluoromethane (Freon 11)	0.0166	0.010	mg/Kg wet	0.0200		83.0	70-130	1.85	20	
1,2,3-Trichloropropane	0.0207	0.0020	mg/Kg wet	0.0200		103	70-130	2.20	20	
1,2,4-Trimethylbenzene	0.0216	0.0020	mg/Kg wet	0.0200		108	70-130	0.975	20	
1,3,5-Trimethylbenzene	0.0222	0.0020	mg/Kg wet	0.0200		111	70-130	0.745	20	
Vinyl Chloride	0.0142	0.010	mg/Kg wet	0.0200		71.0	70-130	0.211	20	
m+p Xylene	0.0433	0.0040	mg/Kg wet	0.0400		108	70-130	1.64	20	
o-Xylene	0.0217	0.0020	mg/Kg wet	0.0200		108	70-130	0.331	20	
Surrogate: 1,2-Dichloroethane-d4	0.0492		mg/Kg wet	0.0500		98.4	70-130			
Surrogate: Toluene-d8	0.0470		mg/Kg wet	0.0500		94.0	70-130			
Surrogate: 4-Bromofluorobenzene	0.0487		mg/Kg wet	0.0500		97.3	70-130			

**Batch B225660 - SW-846 5035**

**Blank (B225660-BLK1)**

Prepared & Analyzed: 03/13/19

Acetone	ND	0.10	mg/Kg wet							R-05
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							
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							

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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
<b>Batch B225660 - SW-846 5035</b>										
<b>Blank (B225660-BLK1)</b>										
Prepared & Analyzed: 03/13/19										
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							
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							
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	0.0441		mg/Kg wet	0.0500		88.2	70-130			
Surrogate: Toluene-d8	0.0482		mg/Kg wet	0.0500		96.3	70-130			
Surrogate: 4-Bromofluorobenzene	0.0500		mg/Kg wet	0.0500		100	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
<b>Batch B225660 - SW-846 5035</b>										
<b>LCS (B225660-BS1)</b>										
					Prepared & Analyzed: 03/13/19					
Acetone	0.323	0.10	mg/Kg wet	0.200		162 *	40-160			L-07A, R-05 †
tert-Amyl Methyl Ether (TAME)	0.0196	0.0010	mg/Kg wet	0.0200		98.0	70-130			
Benzene	0.0175	0.0020	mg/Kg wet	0.0200		87.5	70-130			
Bromobenzene	0.0210	0.0020	mg/Kg wet	0.0200		105	70-130			
Bromochloromethane	0.0213	0.0020	mg/Kg wet	0.0200		107	70-130			
Bromodichloromethane	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130			
Bromoform	0.0209	0.0020	mg/Kg wet	0.0200		104	70-130			
Bromomethane	0.0167	0.010	mg/Kg wet	0.0200		83.4	40-160			V-34 †
2-Butanone (MEK)	0.219	0.040	mg/Kg wet	0.200		110	40-160			†
n-Butylbenzene	0.0191	0.0020	mg/Kg wet	0.0200		95.5	70-130			
sec-Butylbenzene	0.0212	0.0020	mg/Kg wet	0.0200		106	70-130			
tert-Butylbenzene	0.0209	0.0020	mg/Kg wet	0.0200		104	70-130			
tert-Butyl Ethyl Ether (TBEE)	0.0184	0.0010	mg/Kg wet	0.0200		92.1	70-130			
Carbon Disulfide	0.0248	0.0060	mg/Kg wet	0.0200		124	70-130			
Carbon Tetrachloride	0.0186	0.0020	mg/Kg wet	0.0200		93.1	70-130			
Chlorobenzene	0.0211	0.0020	mg/Kg wet	0.0200		106	70-130			
Chlorodibromomethane	0.0228	0.0010	mg/Kg wet	0.0200		114	70-130			
Chloroethane	0.0201	0.010	mg/Kg wet	0.0200		100	70-130			
Chloroform	0.0190	0.0040	mg/Kg wet	0.0200		95.1	70-130			
Chloromethane	0.0189	0.010	mg/Kg wet	0.0200		94.7	40-160			†
2-Chlorotoluene	0.0199	0.0020	mg/Kg wet	0.0200		99.6	70-130			
4-Chlorotoluene	0.0216	0.0020	mg/Kg wet	0.0200		108	70-130			
1,2-Dibromo-3-chloropropane (DBCP)	0.0155	0.0020	mg/Kg wet	0.0200		77.7	70-130			
1,2-Dibromoethane (EDB)	0.0215	0.0010	mg/Kg wet	0.0200		108	70-130			
Dibromomethane	0.0217	0.0020	mg/Kg wet	0.0200		108	70-130			
1,2-Dichlorobenzene	0.0221	0.0020	mg/Kg wet	0.0200		111	70-130			
1,3-Dichlorobenzene	0.0224	0.0020	mg/Kg wet	0.0200		112	70-130			
1,4-Dichlorobenzene	0.0204	0.0020	mg/Kg wet	0.0200		102	70-130			
Dichlorodifluoromethane (Freon 12)	0.0148	0.010	mg/Kg wet	0.0200		73.8	40-160			†
1,1-Dichloroethane	0.0192	0.0020	mg/Kg wet	0.0200		95.9	70-130			
1,2-Dichloroethane	0.0196	0.0020	mg/Kg wet	0.0200		97.8	70-130			
1,1-Dichloroethylene	0.0223	0.0040	mg/Kg wet	0.0200		112	70-130			
cis-1,2-Dichloroethylene	0.0190	0.0020	mg/Kg wet	0.0200		95.1	70-130			
trans-1,2-Dichloroethylene	0.0189	0.0020	mg/Kg wet	0.0200		94.3	70-130			
1,2-Dichloropropane	0.0210	0.0020	mg/Kg wet	0.0200		105	70-130			
1,3-Dichloropropane	0.0210	0.0010	mg/Kg wet	0.0200		105	70-130			
2,2-Dichloropropane	0.0169	0.0020	mg/Kg wet	0.0200		84.5	70-130			
1,1-Dichloropropene	0.0193	0.0020	mg/Kg wet	0.0200		96.3	70-130			
cis-1,3-Dichloropropene	0.0213	0.0010	mg/Kg wet	0.0200		107	70-130			
trans-1,3-Dichloropropene	0.0198	0.0010	mg/Kg wet	0.0200		99.0	70-130			
Diethyl Ether	0.0232	0.010	mg/Kg wet	0.0200		116	70-130			
Diisopropyl Ether (DIPE)	0.0191	0.0010	mg/Kg wet	0.0200		95.7	70-130			
1,4-Dioxane	0.202	0.10	mg/Kg wet	0.200		101	40-160			V-16 †
Ethylbenzene	0.0201	0.0020	mg/Kg wet	0.0200		100	70-130			
Hexachlorobutadiene	0.0207	0.0020	mg/Kg wet	0.0200		103	70-130			
2-Hexanone (MBK)	0.226	0.020	mg/Kg wet	0.200		113	40-160			†
Isopropylbenzene (Cumene)	0.0216	0.0020	mg/Kg wet	0.0200		108	70-130			
p-Isopropyltoluene (p-Cymene)	0.0204	0.0020	mg/Kg wet	0.0200		102	70-130			
Methyl tert-Butyl Ether (MTBE)	0.0195	0.0040	mg/Kg wet	0.0200		97.3	70-130			
Methylene Chloride	0.0188	0.010	mg/Kg wet	0.0200		94.2	70-130			
4-Methyl-2-pentanone (MIBK)	0.223	0.020	mg/Kg wet	0.200		112	40-160			†
Naphthalene	0.0186	0.0040	mg/Kg wet	0.0200		93.2	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 B225660 - SW-846 5035**

**LCS (B225660-BS1)**

Prepared & Analyzed: 03/13/19

n-Propylbenzene	0.0212	0.0020	mg/Kg wet	0.0200		106	70-130			
Styrene	0.0222	0.0020	mg/Kg wet	0.0200		111	70-130			
1,1,1,2-Tetrachloroethane	0.0222	0.0020	mg/Kg wet	0.0200		111	70-130			
1,1,2,2-Tetrachloroethane	0.0205	0.0010	mg/Kg wet	0.0200		102	70-130			
Tetrachloroethylene	0.0225	0.0020	mg/Kg wet	0.0200		113	70-130			
Tetrahydrofuran	0.0197	0.010	mg/Kg wet	0.0200		98.6	70-130			
Toluene	0.0204	0.0020	mg/Kg wet	0.0200		102	70-130			
1,2,3-Trichlorobenzene	0.0196	0.0020	mg/Kg wet	0.0200		98.0	70-130			
1,2,4-Trichlorobenzene	0.0210	0.0020	mg/Kg wet	0.0200		105	70-130			
1,1,1-Trichloroethane	0.0177	0.0020	mg/Kg wet	0.0200		88.3	70-130			
1,1,2-Trichloroethane	0.0201	0.0020	mg/Kg wet	0.0200		100	70-130			
Trichloroethylene	0.0191	0.0020	mg/Kg wet	0.0200		95.3	70-130			
Trichlorofluoromethane (Freon 11)	0.0195	0.010	mg/Kg wet	0.0200		97.6	70-130			
1,2,3-Trichloropropane	0.0214	0.0020	mg/Kg wet	0.0200		107	70-130			
1,2,4-Trimethylbenzene	0.0187	0.0020	mg/Kg wet	0.0200		93.4	70-130			
1,3,5-Trimethylbenzene	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130			
Vinyl Chloride	0.0184	0.010	mg/Kg wet	0.0200		92.1	70-130			
m+p Xylene	0.0392	0.0040	mg/Kg wet	0.0400		98.0	70-130			
o-Xylene	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0434		mg/Kg wet	0.0500		86.8	70-130			
Surrogate: Toluene-d8	0.0498		mg/Kg wet	0.0500		99.5	70-130			
Surrogate: 4-Bromofluorobenzene	0.0495		mg/Kg wet	0.0500		99.1	70-130			

**LCS Dup (B225660-BS1)**

Prepared & Analyzed: 03/13/19

Acetone	0.245	0.10	mg/Kg wet	0.200		122	40-160	27.6 *	20	R-05 †
tert-Amyl Methyl Ether (TAME)	0.0182	0.0010	mg/Kg wet	0.0200		91.0	70-130	7.41	20	
Benzene	0.0167	0.0020	mg/Kg wet	0.0200		83.5	70-130	4.68	20	
Bromobenzene	0.0178	0.0020	mg/Kg wet	0.0200		88.9	70-130	16.4	20	
Bromochloromethane	0.0179	0.0020	mg/Kg wet	0.0200		89.6	70-130	17.4	20	
Bromodichloromethane	0.0193	0.0020	mg/Kg wet	0.0200		96.7	70-130	4.15	20	
Bromoform	0.0190	0.0020	mg/Kg wet	0.0200		95.1	70-130	9.32	20	
Bromomethane	0.0188	0.010	mg/Kg wet	0.0200		93.8	40-160	11.7	20	V-34 †
2-Butanone (MEK)	0.185	0.040	mg/Kg wet	0.200		92.7	40-160	16.8	20	†
n-Butylbenzene	0.0172	0.0020	mg/Kg wet	0.0200		86.2	70-130	10.2	20	
sec-Butylbenzene	0.0196	0.0020	mg/Kg wet	0.0200		98.2	70-130	7.55	20	
tert-Butylbenzene	0.0184	0.0020	mg/Kg wet	0.0200		92.1	70-130	12.6	20	
tert-Butyl Ethyl Ether (TBEE)	0.0180	0.0010	mg/Kg wet	0.0200		90.0	70-130	2.31	20	
Carbon Disulfide	0.0235	0.0060	mg/Kg wet	0.0200		117	70-130	5.39	20	
Carbon Tetrachloride	0.0190	0.0020	mg/Kg wet	0.0200		95.0	70-130	2.02	20	
Chlorobenzene	0.0207	0.0020	mg/Kg wet	0.0200		103	70-130	2.20	20	
Chlorodibromomethane	0.0218	0.0010	mg/Kg wet	0.0200		109	70-130	4.49	20	
Chloroethane	0.0191	0.010	mg/Kg wet	0.0200		95.6	70-130	5.00	20	
Chloroform	0.0178	0.0040	mg/Kg wet	0.0200		89.0	70-130	6.63	20	
Chloromethane	0.0174	0.010	mg/Kg wet	0.0200		86.9	40-160	8.59	20	†
2-Chlorotoluene	0.0185	0.0020	mg/Kg wet	0.0200		92.6	70-130	7.28	20	
4-Chlorotoluene	0.0194	0.0020	mg/Kg wet	0.0200		96.8	70-130	11.1	20	
1,2-Dibromo-3-chloropropane (DBCP)	0.0170	0.0020	mg/Kg wet	0.0200		85.0	70-130	8.97	20	
1,2-Dibromoethane (EDB)	0.0192	0.0010	mg/Kg wet	0.0200		96.1	70-130	11.4	20	
Dibromomethane	0.0199	0.0020	mg/Kg wet	0.0200		99.5	70-130	8.56	20	
1,2-Dichlorobenzene	0.0196	0.0020	mg/Kg wet	0.0200		97.8	70-130	12.4	20	
1,3-Dichlorobenzene	0.0192	0.0020	mg/Kg wet	0.0200		96.1	70-130	15.1	20	
1,4-Dichlorobenzene	0.0184	0.0020	mg/Kg wet	0.0200		91.8	70-130	10.7	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
<b>Batch B225660 - SW-846 5035</b>										
<b>LCS Dup (B225660-BSD1)</b>										
Prepared & Analyzed: 03/13/19										
Dichlorodifluoromethane (Freon 12)	0.0144	0.010	mg/Kg wet	0.0200		71.8	40-160	2.75	20	†
1,1-Dichloroethane	0.0183	0.0020	mg/Kg wet	0.0200		91.4	70-130	4.81	20	
1,2-Dichloroethane	0.0193	0.0020	mg/Kg wet	0.0200		96.5	70-130	1.34	20	
1,1-Dichloroethylene	0.0212	0.0040	mg/Kg wet	0.0200		106	70-130	5.25	20	
cis-1,2-Dichloroethylene	0.0184	0.0020	mg/Kg wet	0.0200		92.1	70-130	3.21	20	
trans-1,2-Dichloroethylene	0.0185	0.0020	mg/Kg wet	0.0200		92.7	70-130	1.71	20	
1,2-Dichloropropane	0.0192	0.0020	mg/Kg wet	0.0200		96.0	70-130	9.15	20	
1,3-Dichloropropane	0.0192	0.0010	mg/Kg wet	0.0200		95.8	70-130	9.16	20	
2,2-Dichloropropane	0.0170	0.0020	mg/Kg wet	0.0200		84.8	70-130	0.354	20	
1,1-Dichloropropene	0.0170	0.0020	mg/Kg wet	0.0200		85.1	70-130	12.3	20	
cis-1,3-Dichloropropene	0.0197	0.0010	mg/Kg wet	0.0200		98.7	70-130	7.79	20	
trans-1,3-Dichloropropene	0.0171	0.0010	mg/Kg wet	0.0200		85.7	70-130	14.4	20	
Diethyl Ether	0.0226	0.010	mg/Kg wet	0.0200		113	70-130	2.36	20	
Diisopropyl Ether (DIPE)	0.0181	0.0010	mg/Kg wet	0.0200		90.6	70-130	5.48	20	
1,4-Dioxane	0.191	0.10	mg/Kg wet	0.200		95.4	40-160	5.69	20	V-16 †
Ethylbenzene	0.0180	0.0020	mg/Kg wet	0.0200		90.2	70-130	10.7	20	
Hexachlorobutadiene	0.0206	0.0020	mg/Kg wet	0.0200		103	70-130	0.388	20	
2-Hexanone (MBK)	0.204	0.020	mg/Kg wet	0.200		102	40-160	10.2	20	†
Isopropylbenzene (Cumene)	0.0205	0.0020	mg/Kg wet	0.0200		102	70-130	5.42	20	
p-Isopropyltoluene (p-Cymene)	0.0187	0.0020	mg/Kg wet	0.0200		93.5	70-130	8.70	20	
Methyl tert-Butyl Ether (MTBE)	0.0183	0.0040	mg/Kg wet	0.0200		91.3	70-130	6.36	20	
Methylene Chloride	0.0177	0.010	mg/Kg wet	0.0200		88.3	70-130	6.47	20	
4-Methyl-2-pentanone (MIBK)	0.203	0.020	mg/Kg wet	0.200		101	40-160	9.69	20	†
Naphthalene	0.0177	0.0040	mg/Kg wet	0.0200		88.5	70-130	5.17	20	
n-Propylbenzene	0.0193	0.0020	mg/Kg wet	0.0200		96.4	70-130	9.49	20	
Styrene	0.0195	0.0020	mg/Kg wet	0.0200		97.5	70-130	13.1	20	
1,1,1,2-Tetrachloroethane	0.0188	0.0020	mg/Kg wet	0.0200		94.2	70-130	16.6	20	
1,1,2,2-Tetrachloroethane	0.0184	0.0010	mg/Kg wet	0.0200		91.8	70-130	10.8	20	
Tetrachloroethylene	0.0233	0.0020	mg/Kg wet	0.0200		116	70-130	3.14	20	
Tetrahydrofuran	0.0191	0.010	mg/Kg wet	0.0200		95.3	70-130	3.40	20	
Toluene	0.0191	0.0020	mg/Kg wet	0.0200		95.7	70-130	6.37	20	
1,2,3-Trichlorobenzene	0.0188	0.0020	mg/Kg wet	0.0200		94.1	70-130	4.06	20	
1,2,4-Trichlorobenzene	0.0189	0.0020	mg/Kg wet	0.0200		94.7	70-130	10.2	20	
1,1,1-Trichloroethane	0.0163	0.0020	mg/Kg wet	0.0200		81.4	70-130	8.13	20	
1,1,2-Trichloroethane	0.0180	0.0020	mg/Kg wet	0.0200		90.1	70-130	10.7	20	
Trichloroethylene	0.0189	0.0020	mg/Kg wet	0.0200		94.5	70-130	0.843	20	
Trichlorofluoromethane (Freon 11)	0.0189	0.010	mg/Kg wet	0.0200		94.7	70-130	3.02	20	
1,2,3-Trichloropropane	0.0178	0.0020	mg/Kg wet	0.0200		89.2	70-130	18.1	20	
1,2,4-Trimethylbenzene	0.0172	0.0020	mg/Kg wet	0.0200		86.2	70-130	8.02	20	
1,3,5-Trimethylbenzene	0.0181	0.0020	mg/Kg wet	0.0200		90.6	70-130	10.7	20	
Vinyl Chloride	0.0176	0.010	mg/Kg wet	0.0200		88.0	70-130	4.55	20	
m+p Xylene	0.0366	0.0040	mg/Kg wet	0.0400		91.4	70-130	6.92	20	
o-Xylene	0.0184	0.0020	mg/Kg wet	0.0200		92.1	70-130	9.22	20	
Surrogate: 1,2-Dichloroethane-d4	0.0437		mg/Kg wet	0.0500		87.4	70-130			
Surrogate: Toluene-d8	0.0503		mg/Kg wet	0.0500		101	70-130			
Surrogate: 4-Bromofluorobenzene	0.0512		mg/Kg wet	0.0500		102	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 B225666 - SW-846 5035**

**Blank (B225666-BLK1)**

Prepared & Analyzed: 03/13/19

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							
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							V-05
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							
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 B225666 - SW-846 5035

Blank (B225666-BLK1)

Prepared & Analyzed: 03/13/19

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	0.0427		mg/Kg wet	0.0500		85.4	70-130			
Surrogate: Toluene-d8	0.0485		mg/Kg wet	0.0500		97.0	70-130			
Surrogate: 4-Bromofluorobenzene	0.0507		mg/Kg wet	0.0500		101	70-130			

LCS (B225666-BS1)

Prepared & Analyzed: 03/13/19

Acetone	0.239	0.10	mg/Kg wet	0.200		120	40-160			†
tert-Amyl Methyl Ether (TAME)	0.0181	0.0010	mg/Kg wet	0.0200		90.3	70-130			
Benzene	0.0172	0.0020	mg/Kg wet	0.0200		85.8	70-130			
Bromobenzene	0.0189	0.0020	mg/Kg wet	0.0200		94.5	70-130			
Bromochloromethane	0.0190	0.0020	mg/Kg wet	0.0200		95.2	70-130			
Bromodichloromethane	0.0199	0.0020	mg/Kg wet	0.0200		99.4	70-130			
Bromoform	0.0214	0.0020	mg/Kg wet	0.0200		107	70-130			
Bromomethane	0.0166	0.010	mg/Kg wet	0.0200		83.0	40-160	V-34		†
2-Butanone (MEK)	0.176	0.040	mg/Kg wet	0.200		88.2	40-160			†
n-Butylbenzene	0.0179	0.0020	mg/Kg wet	0.0200		89.3	70-130			
sec-Butylbenzene	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130			
tert-Butylbenzene	0.0189	0.0020	mg/Kg wet	0.0200		94.4	70-130			
tert-Butyl Ethyl Ether (TBEE)	0.0175	0.0010	mg/Kg wet	0.0200		87.7	70-130			
Carbon Disulfide	0.0251	0.0060	mg/Kg wet	0.0200		125	70-130			
Carbon Tetrachloride	0.0189	0.0020	mg/Kg wet	0.0200		94.6	70-130			
Chlorobenzene	0.0201	0.0020	mg/Kg wet	0.0200		100	70-130			
Chlorodibromomethane	0.0225	0.0010	mg/Kg wet	0.0200		113	70-130			
Chloroethane	0.0206	0.010	mg/Kg wet	0.0200		103	70-130			
Chloroform	0.0174	0.0040	mg/Kg wet	0.0200		87.1	70-130			
Chloromethane	0.0183	0.010	mg/Kg wet	0.0200		91.5	40-160			†
2-Chlorotoluene	0.0187	0.0020	mg/Kg wet	0.0200		93.6	70-130			
4-Chlorotoluene	0.0196	0.0020	mg/Kg wet	0.0200		97.8	70-130			
1,2-Dibromo-3-chloropropane (DBCP)	0.0158	0.0020	mg/Kg wet	0.0200		78.9	70-130			V-05
1,2-Dibromoethane (EDB)	0.0207	0.0010	mg/Kg wet	0.0200		104	70-130			
Dibromomethane	0.0200	0.0020	mg/Kg wet	0.0200		99.9	70-130			
1,2-Dichlorobenzene	0.0188	0.0020	mg/Kg wet	0.0200		93.9	70-130			
1,3-Dichlorobenzene	0.0194	0.0020	mg/Kg wet	0.0200		97.1	70-130			
1,4-Dichlorobenzene	0.0185	0.0020	mg/Kg wet	0.0200		92.5	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
<b>Batch B225666 - SW-846 5035</b>										
<b>LCS (B225666-BS1)</b>										
Prepared & Analyzed: 03/13/19										
Dichlorodifluoromethane (Freon 12)	0.0146	0.010	mg/Kg wet	0.0200		72.9	40-160			†
1,1-Dichloroethane	0.0181	0.0020	mg/Kg wet	0.0200		90.3	70-130			
1,2-Dichloroethane	0.0191	0.0020	mg/Kg wet	0.0200		95.7	70-130			
1,1-Dichloroethylene	0.0223	0.0040	mg/Kg wet	0.0200		112	70-130			
cis-1,2-Dichloroethylene	0.0185	0.0020	mg/Kg wet	0.0200		92.5	70-130			
trans-1,2-Dichloroethylene	0.0185	0.0020	mg/Kg wet	0.0200		92.4	70-130			
1,2-Dichloropropane	0.0191	0.0020	mg/Kg wet	0.0200		95.7	70-130			
1,3-Dichloropropane	0.0196	0.0010	mg/Kg wet	0.0200		98.2	70-130			
2,2-Dichloropropane	0.0168	0.0020	mg/Kg wet	0.0200		84.1	70-130			
1,1-Dichloropropene	0.0170	0.0020	mg/Kg wet	0.0200		84.8	70-130			
cis-1,3-Dichloropropene	0.0199	0.0010	mg/Kg wet	0.0200		99.4	70-130			
trans-1,3-Dichloropropene	0.0186	0.0010	mg/Kg wet	0.0200		92.9	70-130			
Diethyl Ether	0.0208	0.010	mg/Kg wet	0.0200		104	70-130			
Diisopropyl Ether (DIPE)	0.0183	0.0010	mg/Kg wet	0.0200		91.5	70-130			
1,4-Dioxane	0.166	0.10	mg/Kg wet	0.200		82.8	40-160		V-16	†
Ethylbenzene	0.0188	0.0020	mg/Kg wet	0.0200		94.0	70-130			
Hexachlorobutadiene	0.0206	0.0020	mg/Kg wet	0.0200		103	70-130			
2-Hexanone (MBK)	0.194	0.020	mg/Kg wet	0.200		97.1	40-160			†
Isopropylbenzene (Cumene)	0.0214	0.0020	mg/Kg wet	0.0200		107	70-130			
p-Isopropyltoluene (p-Cymene)	0.0188	0.0020	mg/Kg wet	0.0200		94.0	70-130			
Methyl tert-Butyl Ether (MTBE)	0.0176	0.0040	mg/Kg wet	0.0200		87.9	70-130			
Methylene Chloride	0.0184	0.010	mg/Kg wet	0.0200		92.1	70-130			
4-Methyl-2-pentanone (MIBK)	0.198	0.020	mg/Kg wet	0.200		98.9	40-160			†
Naphthalene	0.0171	0.0040	mg/Kg wet	0.0200		85.3	70-130			
n-Propylbenzene	0.0203	0.0020	mg/Kg wet	0.0200		102	70-130			
Styrene	0.0199	0.0020	mg/Kg wet	0.0200		99.6	70-130			
1,1,1,2-Tetrachloroethane	0.0201	0.0020	mg/Kg wet	0.0200		100	70-130			
1,1,1,2,2-Tetrachloroethane	0.0179	0.0010	mg/Kg wet	0.0200		89.4	70-130			
Tetrachloroethylene	0.0228	0.0020	mg/Kg wet	0.0200		114	70-130			
Tetrahydrofuran	0.0179	0.010	mg/Kg wet	0.0200		89.5	70-130			
Toluene	0.0194	0.0020	mg/Kg wet	0.0200		96.8	70-130			
1,2,3-Trichlorobenzene	0.0178	0.0020	mg/Kg wet	0.0200		88.8	70-130			
1,2,4-Trichlorobenzene	0.0179	0.0020	mg/Kg wet	0.0200		89.5	70-130			
1,1,1-Trichloroethane	0.0172	0.0020	mg/Kg wet	0.0200		85.9	70-130			
1,1,2-Trichloroethane	0.0191	0.0020	mg/Kg wet	0.0200		95.4	70-130			
Trichloroethylene	0.0191	0.0020	mg/Kg wet	0.0200		95.7	70-130			
Trichlorofluoromethane (Freon 11)	0.0189	0.010	mg/Kg wet	0.0200		94.7	70-130			
1,2,3-Trichloropropane	0.0193	0.0020	mg/Kg wet	0.0200		96.4	70-130			
1,2,4-Trimethylbenzene	0.0172	0.0020	mg/Kg wet	0.0200		85.9	70-130			
1,3,5-Trimethylbenzene	0.0191	0.0020	mg/Kg wet	0.0200		95.6	70-130			
Vinyl Chloride	0.0189	0.010	mg/Kg wet	0.0200		94.3	70-130			
m+p Xylene	0.0373	0.0040	mg/Kg wet	0.0400		93.4	70-130			
o-Xylene	0.0194	0.0020	mg/Kg wet	0.0200		97.2	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0426		mg/Kg wet	0.0500		85.2	70-130			
Surrogate: Toluene-d8	0.0491		mg/Kg wet	0.0500		98.1	70-130			
Surrogate: 4-Bromofluorobenzene	0.0516		mg/Kg wet	0.0500		103	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
<b>Batch B225666 - SW-846 5035</b>										
<b>LCS Dup (B225666-BSD1)</b>										
Prepared & Analyzed: 03/13/19										
Acetone	0.230	0.10	mg/Kg wet	0.200		115	40-160	3.95	20	†
tert-Amyl Methyl Ether (TAME)	0.0177	0.0010	mg/Kg wet	0.0200		88.6	70-130	1.90	20	
Benzene	0.0172	0.0020	mg/Kg wet	0.0200		86.0	70-130	0.233	20	
Bromobenzene	0.0186	0.0020	mg/Kg wet	0.0200		93.1	70-130	1.49	20	
Bromochloromethane	0.0185	0.0020	mg/Kg wet	0.0200		92.6	70-130	2.77	20	
Bromodichloromethane	0.0191	0.0020	mg/Kg wet	0.0200		95.6	70-130	3.90	20	
Bromoform	0.0187	0.0020	mg/Kg wet	0.0200		93.3	70-130	13.5	20	
Bromomethane	0.0164	0.010	mg/Kg wet	0.0200		82.2	40-160	0.969	20	V-34 †
2-Butanone (MEK)	0.177	0.040	mg/Kg wet	0.200		88.3	40-160	0.0793	20	†
n-Butylbenzene	0.0176	0.0020	mg/Kg wet	0.0200		88.2	70-130	1.24	20	
sec-Butylbenzene	0.0195	0.0020	mg/Kg wet	0.0200		97.6	70-130	3.42	20	
tert-Butylbenzene	0.0190	0.0020	mg/Kg wet	0.0200		94.8	70-130	0.423	20	
tert-Butyl Ethyl Ether (TBEE)	0.0168	0.0010	mg/Kg wet	0.0200		84.2	70-130	4.07	20	
Carbon Disulfide	0.0251	0.0060	mg/Kg wet	0.0200		125	70-130	0.0798	20	
Carbon Tetrachloride	0.0188	0.0020	mg/Kg wet	0.0200		93.9	70-130	0.743	20	
Chlorobenzene	0.0201	0.0020	mg/Kg wet	0.0200		100	70-130	0.0997	20	
Chlorodibromomethane	0.0200	0.0010	mg/Kg wet	0.0200		100	70-130	11.9	20	
Chloroethane	0.0192	0.010	mg/Kg wet	0.0200		96.2	70-130	6.83	20	
Chloroform	0.0178	0.0040	mg/Kg wet	0.0200		88.9	70-130	2.05	20	
Chloromethane	0.0177	0.010	mg/Kg wet	0.0200		88.4	40-160	3.45	20	†
2-Chlorotoluene	0.0184	0.0020	mg/Kg wet	0.0200		91.8	70-130	1.94	20	
4-Chlorotoluene	0.0193	0.0020	mg/Kg wet	0.0200		96.7	70-130	1.13	20	
1,2-Dibromo-3-chloropropane (DBCP)	0.0150	0.0020	mg/Kg wet	0.0200		75.2	70-130	4.80	20	V-05
1,2-Dibromoethane (EDB)	0.0197	0.0010	mg/Kg wet	0.0200		98.5	70-130	5.14	20	
Dibromomethane	0.0195	0.0020	mg/Kg wet	0.0200		97.3	70-130	2.64	20	
1,2-Dichlorobenzene	0.0193	0.0020	mg/Kg wet	0.0200		96.4	70-130	2.63	20	
1,3-Dichlorobenzene	0.0194	0.0020	mg/Kg wet	0.0200		96.9	70-130	0.206	20	
1,4-Dichlorobenzene	0.0179	0.0020	mg/Kg wet	0.0200		89.6	70-130	3.19	20	
Dichlorodifluoromethane (Freon 12)	0.0140	0.010	mg/Kg wet	0.0200		70.1	40-160	3.92	20	†
1,1-Dichloroethane	0.0179	0.0020	mg/Kg wet	0.0200		89.6	70-130	0.778	20	
1,2-Dichloroethane	0.0184	0.0020	mg/Kg wet	0.0200		91.8	70-130	4.16	20	
1,1-Dichloroethylene	0.0213	0.0040	mg/Kg wet	0.0200		106	70-130	4.77	20	
cis-1,2-Dichloroethylene	0.0184	0.0020	mg/Kg wet	0.0200		92.0	70-130	0.542	20	
trans-1,2-Dichloroethylene	0.0182	0.0020	mg/Kg wet	0.0200		91.0	70-130	1.53	20	
1,2-Dichloropropane	0.0181	0.0020	mg/Kg wet	0.0200		90.3	70-130	5.81	20	
1,3-Dichloropropane	0.0186	0.0010	mg/Kg wet	0.0200		93.1	70-130	5.33	20	
2,2-Dichloropropane	0.0161	0.0020	mg/Kg wet	0.0200		80.3	70-130	4.62	20	
1,1-Dichloropropene	0.0168	0.0020	mg/Kg wet	0.0200		84.2	70-130	0.710	20	
cis-1,3-Dichloropropene	0.0189	0.0010	mg/Kg wet	0.0200		94.5	70-130	5.05	20	
trans-1,3-Dichloropropene	0.0176	0.0010	mg/Kg wet	0.0200		87.8	70-130	5.64	20	
Diethyl Ether	0.0214	0.010	mg/Kg wet	0.0200		107	70-130	2.74	20	
Diisopropyl Ether (DIPE)	0.0178	0.0010	mg/Kg wet	0.0200		88.8	70-130	3.00	20	
1,4-Dioxane	0.159	0.10	mg/Kg wet	0.200		79.5	40-160	4.02	20	V-16 †
Ethylbenzene	0.0189	0.0020	mg/Kg wet	0.0200		94.5	70-130	0.531	20	
Hexachlorobutadiene	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130	1.96	20	
2-Hexanone (MBK)	0.191	0.020	mg/Kg wet	0.200		95.6	40-160	1.55	20	†
Isopropylbenzene (Cumene)	0.0208	0.0020	mg/Kg wet	0.0200		104	70-130	2.46	20	
p-Isopropyltoluene (p-Cymene)	0.0179	0.0020	mg/Kg wet	0.0200		89.6	70-130	4.79	20	
Methyl tert-Butyl Ether (MTBE)	0.0177	0.0040	mg/Kg wet	0.0200		88.5	70-130	0.680	20	
Methylene Chloride	0.0180	0.010	mg/Kg wet	0.0200		90.0	70-130	2.31	20	
4-Methyl-2-pentanone (MIBK)	0.196	0.020	mg/Kg wet	0.200		97.9	40-160	0.955	20	†
Naphthalene	0.0169	0.0040	mg/Kg wet	0.0200		84.5	70-130	0.942	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
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**Batch B225666 - SW-846 5035**

**LCS Dup (B225666-BSD1)**

Prepared & Analyzed: 03/13/19

n-Propylbenzene	0.0196	0.0020	mg/Kg wet	0.0200		97.8	70-130	3.81	20	
Styrene	0.0200	0.0020	mg/Kg wet	0.0200		99.8	70-130	0.201	20	
1,1,1,2-Tetrachloroethane	0.0187	0.0020	mg/Kg wet	0.0200		93.5	70-130	7.12	20	
1,1,2,2-Tetrachloroethane	0.0183	0.0010	mg/Kg wet	0.0200		91.5	70-130	2.32	20	
Tetrachloroethylene	0.0220	0.0020	mg/Kg wet	0.0200		110	70-130	3.57	20	
Tetrahydrofuran	0.0197	0.010	mg/Kg wet	0.0200		98.5	70-130	9.57	20	
Toluene	0.0186	0.0020	mg/Kg wet	0.0200		93.1	70-130	3.90	20	
1,2,3-Trichlorobenzene	0.0175	0.0020	mg/Kg wet	0.0200		87.3	70-130	1.70	20	
1,2,4-Trichlorobenzene	0.0179	0.0020	mg/Kg wet	0.0200		89.6	70-130	0.112	20	
1,1,1-Trichloroethane	0.0175	0.0020	mg/Kg wet	0.0200		87.5	70-130	1.85	20	
1,1,2-Trichloroethane	0.0179	0.0020	mg/Kg wet	0.0200		89.7	70-130	6.16	20	
Trichloroethylene	0.0185	0.0020	mg/Kg wet	0.0200		92.7	70-130	3.18	20	
Trichlorofluoromethane (Freon 11)	0.0197	0.010	mg/Kg wet	0.0200		98.5	70-130	3.93	20	
1,2,3-Trichloropropane	0.0192	0.0020	mg/Kg wet	0.0200		95.8	70-130	0.624	20	
1,2,4-Trimethylbenzene	0.0169	0.0020	mg/Kg wet	0.0200		84.6	70-130	1.52	20	
1,3,5-Trimethylbenzene	0.0191	0.0020	mg/Kg wet	0.0200		95.3	70-130	0.314	20	
Vinyl Chloride	0.0184	0.010	mg/Kg wet	0.0200		91.8	70-130	2.69	20	
m+p Xylene	0.0363	0.0040	mg/Kg wet	0.0400		90.7	70-130	2.93	20	
o-Xylene	0.0185	0.0020	mg/Kg wet	0.0200		92.7	70-130	4.74	20	
Surrogate: 1,2-Dichloroethane-d4	0.0425		mg/Kg wet	0.0500		84.9	70-130			
Surrogate: Toluene-d8	0.0490		mg/Kg wet	0.0500		98.0	70-130			
Surrogate: 4-Bromofluorobenzene	0.0515		mg/Kg wet	0.0500		103	70-130			

**Batch B225708 - SW-846 5035**

**Blank (B225708-BLK1)**

Prepared & Analyzed: 03/14/19

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							
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							

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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
<b>Batch B225708 - SW-846 5035</b>										
<b>Blank (B225708-BLK1)</b>										
Prepared & Analyzed: 03/14/19										
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							
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							
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							
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							L-04
m+p Xylene	ND	0.0040	mg/Kg wet							
o-Xylene	ND	0.0020	mg/Kg wet							
Surrogate: 1,2-Dichloroethane-d4	0.0503		mg/Kg wet	0.0500		101	70-130			
Surrogate: Toluene-d8	0.0461		mg/Kg wet	0.0500		92.1	70-130			
Surrogate: 4-Bromofluorobenzene	0.0494		mg/Kg wet	0.0500		98.9	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
<b>Batch B225708 - SW-846 5035</b>										
<b>LCS (B225708-BS1)</b>										
Prepared & Analyzed: 03/14/19										
Acetone	0.233	0.10	mg/Kg wet	0.200		116	40-160			†
tert-Amyl Methyl Ether (TAME)	0.0184	0.0010	mg/Kg wet	0.0200		92.0	70-130			
Benzene	0.0168	0.0020	mg/Kg wet	0.0200		84.2	70-130			
Bromobenzene	0.0219	0.0020	mg/Kg wet	0.0200		110	70-130			
Bromochloromethane	0.0175	0.0020	mg/Kg wet	0.0200		87.7	70-130			
Bromodichloromethane	0.0194	0.0020	mg/Kg wet	0.0200		97.0	70-130			
Bromoform	0.0238	0.0020	mg/Kg wet	0.0200		119	70-130			V-20
Bromomethane	0.0103	0.010	mg/Kg wet	0.0200		51.3	40-160			L-14, V-34 †
2-Butanone (MEK)	0.210	0.040	mg/Kg wet	0.200		105	40-160			†
n-Butylbenzene	0.0229	0.0020	mg/Kg wet	0.0200		114	70-130			
sec-Butylbenzene	0.0231	0.0020	mg/Kg wet	0.0200		116	70-130			
tert-Butylbenzene	0.0228	0.0020	mg/Kg wet	0.0200		114	70-130			
tert-Butyl Ethyl Ether (TBEE)	0.0178	0.0010	mg/Kg wet	0.0200		89.2	70-130			
Carbon Disulfide	0.0183	0.0060	mg/Kg wet	0.0200		91.4	70-130			
Carbon Tetrachloride	0.0188	0.0020	mg/Kg wet	0.0200		93.9	70-130			
Chlorobenzene	0.0218	0.0020	mg/Kg wet	0.0200		109	70-130			
Chlorodibromomethane	0.0207	0.0010	mg/Kg wet	0.0200		104	70-130			
Chloroethane	0.0175	0.010	mg/Kg wet	0.0200		87.7	70-130			
Chloroform	0.0176	0.0040	mg/Kg wet	0.0200		87.9	70-130			
Chloromethane	0.0120	0.010	mg/Kg wet	0.0200		60.2	40-160			†
2-Chlorotoluene	0.0224	0.0020	mg/Kg wet	0.0200		112	70-130			
4-Chlorotoluene	0.0221	0.0020	mg/Kg wet	0.0200		111	70-130			
1,2-Dibromo-3-chloropropane (DBCP)	0.0223	0.0020	mg/Kg wet	0.0200		112	70-130			
1,2-Dibromoethane (EDB)	0.0200	0.0010	mg/Kg wet	0.0200		99.9	70-130			
Dibromomethane	0.0183	0.0020	mg/Kg wet	0.0200		91.3	70-130			
1,2-Dichlorobenzene	0.0223	0.0020	mg/Kg wet	0.0200		112	70-130			
1,3-Dichlorobenzene	0.0231	0.0020	mg/Kg wet	0.0200		116	70-130			
1,4-Dichlorobenzene	0.0218	0.0020	mg/Kg wet	0.0200		109	70-130			
Dichlorodifluoromethane (Freon 12)	0.0125	0.010	mg/Kg wet	0.0200		62.6	40-160			L-14 †
1,1-Dichloroethane	0.0174	0.0020	mg/Kg wet	0.0200		86.8	70-130			
1,2-Dichloroethane	0.0187	0.0020	mg/Kg wet	0.0200		93.7	70-130			
1,1-Dichloroethylene	0.0175	0.0040	mg/Kg wet	0.0200		87.3	70-130			
cis-1,2-Dichloroethylene	0.0173	0.0020	mg/Kg wet	0.0200		86.3	70-130			
trans-1,2-Dichloroethylene	0.0174	0.0020	mg/Kg wet	0.0200		87.0	70-130			
1,2-Dichloropropane	0.0187	0.0020	mg/Kg wet	0.0200		93.7	70-130			
1,3-Dichloropropane	0.0179	0.0010	mg/Kg wet	0.0200		89.4	70-130			
2,2-Dichloropropane	0.0185	0.0020	mg/Kg wet	0.0200		92.3	70-130			
1,1-Dichloropropene	0.0172	0.0020	mg/Kg wet	0.0200		86.2	70-130			
cis-1,3-Dichloropropene	0.0186	0.0010	mg/Kg wet	0.0200		93.2	70-130			
trans-1,3-Dichloropropene	0.0195	0.0010	mg/Kg wet	0.0200		97.7	70-130			
Diethyl Ether	0.0161	0.010	mg/Kg wet	0.0200		80.7	70-130			
Diisopropyl Ether (DIPE)	0.0176	0.0010	mg/Kg wet	0.0200		87.9	70-130			
1,4-Dioxane	0.204	0.10	mg/Kg wet	0.200		102	40-160			†
Ethylbenzene	0.0213	0.0020	mg/Kg wet	0.0200		107	70-130			
Hexachlorobutadiene	0.0241	0.0020	mg/Kg wet	0.0200		121	70-130			
2-Hexanone (MBK)	0.202	0.020	mg/Kg wet	0.200		101	40-160			†
Isopropylbenzene (Cumene)	0.0229	0.0020	mg/Kg wet	0.0200		114	70-130			
p-Isopropyltoluene (p-Cymene)	0.0229	0.0020	mg/Kg wet	0.0200		114	70-130			
Methyl tert-Butyl Ether (MTBE)	0.0179	0.0040	mg/Kg wet	0.0200		89.3	70-130			
Methylene Chloride	0.0182	0.010	mg/Kg wet	0.0200		91.0	70-130			
4-Methyl-2-pentanone (MIBK)	0.194	0.020	mg/Kg wet	0.200		97.1	40-160			†
Naphthalene	0.0210	0.0040	mg/Kg wet	0.0200		105	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
<b>Batch B225708 - SW-846 5035</b>										
<b>LCS (B225708-BS1)</b>										
Prepared & Analyzed: 03/14/19										
n-Propylbenzene	0.0220	0.0020	mg/Kg wet	0.0200		110	70-130			
Styrene	0.0217	0.0020	mg/Kg wet	0.0200		108	70-130			
1,1,1,2-Tetrachloroethane	0.0219	0.0020	mg/Kg wet	0.0200		110	70-130			
1,1,2,2-Tetrachloroethane	0.0225	0.0010	mg/Kg wet	0.0200		112	70-130			
Tetrachloroethylene	0.0199	0.0020	mg/Kg wet	0.0200		99.3	70-130			
Tetrahydrofuran	0.0171	0.010	mg/Kg wet	0.0200		85.7	70-130			
Toluene	0.0186	0.0020	mg/Kg wet	0.0200		93.0	70-130			
1,2,3-Trichlorobenzene	0.0225	0.0020	mg/Kg wet	0.0200		113	70-130			
1,2,4-Trichlorobenzene	0.0224	0.0020	mg/Kg wet	0.0200		112	70-130			
1,1,1-Trichloroethane	0.0185	0.0020	mg/Kg wet	0.0200		92.7	70-130			
1,1,2-Trichloroethane	0.0192	0.0020	mg/Kg wet	0.0200		95.8	70-130			
Trichloroethylene	0.0184	0.0020	mg/Kg wet	0.0200		92.2	70-130			
Trichlorofluoromethane (Freon 11)	0.0156	0.010	mg/Kg wet	0.0200		78.0	70-130			
1,2,3-Trichloropropane	0.0194	0.0020	mg/Kg wet	0.0200		97.0	70-130			
1,2,4-Trimethylbenzene	0.0217	0.0020	mg/Kg wet	0.0200		108	70-130			
1,3,5-Trimethylbenzene	0.0223	0.0020	mg/Kg wet	0.0200		111	70-130			
<b>Vinyl Chloride</b>	0.0135	0.010	mg/Kg wet	0.0200		<b>67.4</b> *	70-130			L-04
m+p Xylene	0.0438	0.0040	mg/Kg wet	0.0400		109	70-130			
o-Xylene	0.0218	0.0020	mg/Kg wet	0.0200		109	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0488		mg/Kg wet	0.0500		97.7	70-130			
Surrogate: Toluene-d8	0.0473		mg/Kg wet	0.0500		94.6	70-130			
Surrogate: 4-Bromofluorobenzene	0.0490		mg/Kg wet	0.0500		98.1	70-130			
<b>LCS Dup (B225708-BS1)</b>										
Prepared & Analyzed: 03/14/19										
Acetone	0.209	0.10	mg/Kg wet	0.200		105	40-160	10.8	20	†
tert-Amyl Methyl Ether (TAME)	0.0184	0.0010	mg/Kg wet	0.0200		91.9	70-130	0.0652	20	
Benzene	0.0168	0.0020	mg/Kg wet	0.0200		84.0	70-130	0.333	20	
Bromobenzene	0.0220	0.0020	mg/Kg wet	0.0200		110	70-130	0.465	20	
Bromochloromethane	0.0179	0.0020	mg/Kg wet	0.0200		89.6	70-130	2.19	20	
Bromodichloromethane	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130	4.20	20	
Bromoform	0.0245	0.0020	mg/Kg wet	0.0200		122	70-130	2.73	20	V-20
Bromomethane	0.0110	0.010	mg/Kg wet	0.0200		54.9	40-160	6.82	20	L-14, V-34 †
2-Butanone (MEK)	0.210	0.040	mg/Kg wet	0.200		105	40-160	0.402	20	†
n-Butylbenzene	0.0230	0.0020	mg/Kg wet	0.0200		115	70-130	0.471	20	
sec-Butylbenzene	0.0231	0.0020	mg/Kg wet	0.0200		116	70-130	0.0778	20	
tert-Butylbenzene	0.0228	0.0020	mg/Kg wet	0.0200		114	70-130	0.289	20	
tert-Butyl Ethyl Ether (TBEE)	0.0176	0.0010	mg/Kg wet	0.0200		88.1	70-130	1.18	20	
Carbon Disulfide	0.0183	0.0060	mg/Kg wet	0.0200		91.3	70-130	0.142	20	
Carbon Tetrachloride	0.0190	0.0020	mg/Kg wet	0.0200		95.0	70-130	1.16	20	
Chlorobenzene	0.0222	0.0020	mg/Kg wet	0.0200		111	70-130	1.54	20	
Chlorodibromomethane	0.0211	0.0010	mg/Kg wet	0.0200		106	70-130	1.92	20	
Chloroethane	0.0173	0.010	mg/Kg wet	0.0200		86.3	70-130	1.54	20	
Chloroform	0.0176	0.0040	mg/Kg wet	0.0200		87.9	70-130	0.0683	20	
Chloromethane	0.0121	0.010	mg/Kg wet	0.0200		60.6	40-160	0.762	20	†
2-Chlorotoluene	0.0226	0.0020	mg/Kg wet	0.0200		113	70-130	0.498	20	
4-Chlorotoluene	0.0225	0.0020	mg/Kg wet	0.0200		112	70-130	1.48	20	
1,2-Dibromo-3-chloropropane (DBCP)	0.0238	0.0020	mg/Kg wet	0.0200		119	70-130	6.47	20	
1,2-Dibromoethane (EDB)	0.0204	0.0010	mg/Kg wet	0.0200		102	70-130	2.08	20	
Dibromomethane	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130	9.95	20	
1,2-Dichlorobenzene	0.0231	0.0020	mg/Kg wet	0.0200		115	70-130	3.44	20	
1,3-Dichlorobenzene	0.0233	0.0020	mg/Kg wet	0.0200		117	70-130	0.922	20	
1,4-Dichlorobenzene	0.0219	0.0020	mg/Kg wet	0.0200		109	70-130	0.275	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
<b>Batch B225708 - SW-846 5035</b>										
<b>LCS Dup (B225708-BSD1)</b>										
Prepared & Analyzed: 03/14/19										
Dichlorodifluoromethane (Freon 12)	0.0124	0.010	mg/Kg wet	0.0200		61.9	40-160	1.19	20	L-14 †
1,1-Dichloroethane	0.0171	0.0020	mg/Kg wet	0.0200		85.5	70-130	1.47	20	
1,2-Dichloroethane	0.0195	0.0020	mg/Kg wet	0.0200		97.7	70-130	4.11	20	
1,1-Dichloroethylene	0.0174	0.0040	mg/Kg wet	0.0200		87.2	70-130	0.103	20	
cis-1,2-Dichloroethylene	0.0172	0.0020	mg/Kg wet	0.0200		85.9	70-130	0.395	20	
trans-1,2-Dichloroethylene	0.0173	0.0020	mg/Kg wet	0.0200		86.4	70-130	0.669	20	
1,2-Dichloropropane	0.0191	0.0020	mg/Kg wet	0.0200		95.6	70-130	2.00	20	
1,3-Dichloropropane	0.0185	0.0010	mg/Kg wet	0.0200		92.3	70-130	3.15	20	
2,2-Dichloropropane	0.0178	0.0020	mg/Kg wet	0.0200		89.0	70-130	3.64	20	
1,1-Dichloropropene	0.0172	0.0020	mg/Kg wet	0.0200		86.0	70-130	0.221	20	
cis-1,3-Dichloropropene	0.0188	0.0010	mg/Kg wet	0.0200		94.0	70-130	0.812	20	
trans-1,3-Dichloropropene	0.0198	0.0010	mg/Kg wet	0.0200		98.9	70-130	1.22	20	
Diethyl Ether	0.0162	0.010	mg/Kg wet	0.0200		80.9	70-130	0.235	20	
Diisopropyl Ether (DIPE)	0.0176	0.0010	mg/Kg wet	0.0200		88.1	70-130	0.159	20	
1,4-Dioxane	0.192	0.10	mg/Kg wet	0.200		95.8	40-160	6.43	20	†
Ethylbenzene	0.0217	0.0020	mg/Kg wet	0.0200		108	70-130	1.68	20	
Hexachlorobutadiene	0.0246	0.0020	mg/Kg wet	0.0200		123	70-130	1.83	20	
2-Hexanone (MBK)	0.207	0.020	mg/Kg wet	0.200		104	40-160	2.58	20	†
Isopropylbenzene (Cumene)	0.0232	0.0020	mg/Kg wet	0.0200		116	70-130	1.52	20	
p-Isopropyltoluene (p-Cymene)	0.0234	0.0020	mg/Kg wet	0.0200		117	70-130	2.22	20	
Methyl tert-Butyl Ether (MTBE)	0.0179	0.0040	mg/Kg wet	0.0200		89.7	70-130	0.458	20	
Methylene Chloride	0.0165	0.010	mg/Kg wet	0.0200		82.5	70-130	9.86	20	
4-Methyl-2-pentanone (MIBK)	0.204	0.020	mg/Kg wet	0.200		102	40-160	4.88	20	†
Naphthalene	0.0218	0.0040	mg/Kg wet	0.0200		109	70-130	3.93	20	
n-Propylbenzene	0.0227	0.0020	mg/Kg wet	0.0200		114	70-130	3.25	20	
Styrene	0.0224	0.0020	mg/Kg wet	0.0200		112	70-130	3.07	20	
1,1,1,2-Tetrachloroethane	0.0222	0.0020	mg/Kg wet	0.0200		111	70-130	1.47	20	
1,1,2,2-Tetrachloroethane	0.0232	0.0010	mg/Kg wet	0.0200		116	70-130	3.05	20	
Tetrachloroethylene	0.0204	0.0020	mg/Kg wet	0.0200		102	70-130	2.94	20	
Tetrahydrofuran	0.0182	0.010	mg/Kg wet	0.0200		91.0	70-130	5.93	20	
Toluene	0.0191	0.0020	mg/Kg wet	0.0200		95.7	70-130	2.87	20	
1,2,3-Trichlorobenzene	0.0225	0.0020	mg/Kg wet	0.0200		113	70-130	0.0800	20	
1,2,4-Trichlorobenzene	0.0225	0.0020	mg/Kg wet	0.0200		113	70-130	0.543	20	
1,1,1-Trichloroethane	0.0180	0.0020	mg/Kg wet	0.0200		90.2	70-130	2.72	20	
1,1,2-Trichloroethane	0.0201	0.0020	mg/Kg wet	0.0200		100	70-130	4.73	20	
Trichloroethylene	0.0187	0.0020	mg/Kg wet	0.0200		93.3	70-130	1.12	20	
Trichlorofluoromethane (Freon 11)	0.0158	0.010	mg/Kg wet	0.0200		79.2	70-130	1.53	20	
1,2,3-Trichloropropane	0.0207	0.0020	mg/Kg wet	0.0200		104	70-130	6.67	20	
1,2,4-Trimethylbenzene	0.0218	0.0020	mg/Kg wet	0.0200		109	70-130	0.625	20	
1,3,5-Trimethylbenzene	0.0226	0.0020	mg/Kg wet	0.0200		113	70-130	1.13	20	
<b>Vinyl Chloride</b>	0.0134	0.010	mg/Kg wet	0.0200		<b>66.9</b> *	70-130	0.685	20	L-04
m+p Xylene	0.0444	0.0040	mg/Kg wet	0.0400		111	70-130	1.48	20	
o-Xylene	0.0220	0.0020	mg/Kg wet	0.0200		110	70-130	1.01	20	
Surrogate: 1,2-Dichloroethane-d4	0.0493		mg/Kg wet	0.0500		98.6	70-130			
Surrogate: Toluene-d8	0.0476		mg/Kg wet	0.0500		95.1	70-130			
Surrogate: 4-Bromofluorobenzene	0.0484		mg/Kg wet	0.0500		96.9	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
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**Batch B225792 - SW-846 3546**

**Blank (B225792-BLK1)**

Prepared: 03/14/19 Analyzed: 03/16/19

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							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							
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							
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							V-20
Dibenzofuran	ND	0.34	mg/Kg wet							
Di-n-butylphthalate	ND	0.34	mg/Kg wet							
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							
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							
2,4-Dinitrophenol	ND	0.66	mg/Kg wet							
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							
1,2-Diphenylhydrazine/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							

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
<b>Batch B225792 - SW-846 3546</b>										
<b>Blank (B225792-BLK1)</b>										
Prepared: 03/14/19 Analyzed: 03/16/19										
Phenol	ND	0.34	mg/Kg wet							
Pyrene	ND	0.17	mg/Kg wet							
Pyridine	ND	0.34	mg/Kg wet							
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	8.14		mg/Kg wet	6.67		122	30-130			
Surrogate: Phenol-d6	7.94		mg/Kg wet	6.67		119	30-130			
Surrogate: Nitrobenzene-d5	3.96		mg/Kg wet	3.33		119	30-130			
Surrogate: 2-Fluorobiphenyl	3.83		mg/Kg wet	3.33		115	30-130			
Surrogate: 2,4,6-Tribromophenol	8.26		mg/Kg wet	6.67		124	30-130			
Surrogate: p-Terphenyl-d14	4.08		mg/Kg wet	3.33		122	30-130			
<b>LCS (B225792-BS1)</b>										
Prepared: 03/14/19 Analyzed: 03/16/19										
Acenaphthene	1.44	0.17	mg/Kg wet	1.67		86.4	40-140			
Acenaphthylene	1.53	0.17	mg/Kg wet	1.67		91.9	40-140			
Acetophenone	1.26	0.34	mg/Kg wet	1.67		75.8	40-140			
Aniline	0.780	0.34	mg/Kg wet	1.67		46.8	40-140			V-34
Anthracene	1.63	0.17	mg/Kg wet	1.67		98.0	40-140			
Benzo(a)anthracene	1.56	0.17	mg/Kg wet	1.67		93.3	40-140			
Benzo(a)pyrene	1.72	0.17	mg/Kg wet	1.67		103	40-140			
Benzo(b)fluoranthene	1.59	0.17	mg/Kg wet	1.67		95.3	40-140			
Benzo(g,h,i)perylene	1.83	0.17	mg/Kg wet	1.67		110	40-140			
Benzo(k)fluoranthene	1.60	0.17	mg/Kg wet	1.67		96.1	40-140			
Bis(2-chloroethoxy)methane	1.66	0.34	mg/Kg wet	1.67		99.4	40-140			
Bis(2-chloroethyl)ether	1.38	0.34	mg/Kg wet	1.67		82.7	40-140			
Bis(2-chloroisopropyl)ether	1.52	0.34	mg/Kg wet	1.67		91.4	40-140			
Bis(2-Ethylhexyl)phthalate	1.67	0.34	mg/Kg wet	1.67		100	40-140			
4-Bromophenylphenylether	1.71	0.34	mg/Kg wet	1.67		103	40-140			
Butylbenzylphthalate	1.64	0.34	mg/Kg wet	1.67		98.6	40-140			
4-Chloroaniline	0.666	0.66	mg/Kg wet	1.67		40.0	15-140			V-34 †
2-Chloronaphthalene	1.28	0.34	mg/Kg wet	1.67		77.0	40-140			
2-Chlorophenol	1.39	0.34	mg/Kg wet	1.67		83.1	30-130			
Chrysene	1.62	0.17	mg/Kg wet	1.67		97.3	40-140			
Dibenz(a,h)anthracene	1.70	0.17	mg/Kg wet	1.67		102	40-140			V-06
Dibenzofuran	1.69	0.34	mg/Kg wet	1.67		102	40-140			
Di-n-butylphthalate	1.66	0.34	mg/Kg wet	1.67		99.7	40-140			
1,2-Dichlorobenzene	1.21	0.34	mg/Kg wet	1.67		72.3	40-140			
1,3-Dichlorobenzene	1.18	0.34	mg/Kg wet	1.67		71.0	40-140			
1,4-Dichlorobenzene	1.18	0.34	mg/Kg wet	1.67		71.1	40-140			
3,3-Dichlorobenzidine	1.17	0.17	mg/Kg wet	1.67		70.4	40-140			
2,4-Dichlorophenol	1.59	0.34	mg/Kg wet	1.67		95.6	30-130			
Diethylphthalate	1.70	0.34	mg/Kg wet	1.67		102	40-140			
2,4-Dimethylphenol	1.56	0.34	mg/Kg wet	1.67		93.7	30-130			
Dimethylphthalate	1.61	0.34	mg/Kg wet	1.67		96.5	40-140			
2,4-Dinitrophenol	1.37	0.66	mg/Kg wet	1.67		82.2	15-140			†
2,4-Dinitrotoluene	1.56	0.34	mg/Kg wet	1.67		93.6	40-140			
2,6-Dinitrotoluene	1.62	0.34	mg/Kg wet	1.67		97.5	40-140			
Di-n-octylphthalate	1.64	0.34	mg/Kg wet	1.67		98.3	40-140			
1,2-Diphenylhydrazine/Azobenzene	1.60	0.34	mg/Kg wet	1.67		96.0	40-140			
Fluoranthene	1.65	0.17	mg/Kg wet	1.67		98.9	40-140			
Fluorene	1.66	0.17	mg/Kg wet	1.67		99.7	40-140			

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 B225792 - SW-846 3546

LCS (B225792-BS1)

Prepared: 03/14/19 Analyzed: 03/16/19

Hexachlorobenzene	1.62	0.34	mg/Kg wet	1.67		97.1	40-140			
Hexachlorobutadiene	1.25	0.34	mg/Kg wet	1.67		75.2	40-140			
Hexachloroethane	1.17	0.34	mg/Kg wet	1.67		69.9	40-140			
Indeno(1,2,3-cd)pyrene	1.78	0.17	mg/Kg wet	1.67		107	40-140			
Isophorone	1.47	0.34	mg/Kg wet	1.67		88.4	40-140			
2-Methylnaphthalene	1.43	0.17	mg/Kg wet	1.67		85.6	40-140			
2-Methylphenol	1.37	0.34	mg/Kg wet	1.67		82.3	30-130			
3/4-Methylphenol	1.36	0.34	mg/Kg wet	1.67		81.9	30-130			
Naphthalene	1.33	0.17	mg/Kg wet	1.67		79.7	40-140			
Nitrobenzene	1.33	0.34	mg/Kg wet	1.67		79.6	40-140			
2-Nitrophenol	1.42	0.34	mg/Kg wet	1.67		85.4	30-130			
4-Nitrophenol	1.47	0.66	mg/Kg wet	1.67		88.3	15-140			†
Pentachlorophenol	1.84	0.34	mg/Kg wet	1.67		111	30-130			
Phenanthrene	1.64	0.17	mg/Kg wet	1.67		98.3	40-140			
Phenol	1.43	0.34	mg/Kg wet	1.67		85.7	15-140			†
Pyrene	1.59	0.17	mg/Kg wet	1.67		95.3	40-140			
Pyridine	1.03	0.34	mg/Kg wet	1.67		61.6	30-140			†
1,2,4-Trichlorobenzene	1.29	0.34	mg/Kg wet	1.67		77.7	40-140			
2,4,5-Trichlorophenol	1.66	0.34	mg/Kg wet	1.67		99.6	30-130			
2,4,6-Trichlorophenol	1.72	0.34	mg/Kg wet	1.67		103	30-130			
Surrogate: 2-Fluorophenol	5.53		mg/Kg wet	6.67		83.0	30-130			
Surrogate: Phenol-d6	5.79		mg/Kg wet	6.67		86.9	30-130			
Surrogate: Nitrobenzene-d5	2.83		mg/Kg wet	3.33		85.0	30-130			
Surrogate: 2-Fluorobiphenyl	3.42		mg/Kg wet	3.33		103	30-130			
Surrogate: 2,4,6-Tribromophenol	7.92		mg/Kg wet	6.67		119	30-130			
Surrogate: p-Terphenyl-d14	3.50		mg/Kg wet	3.33		105	30-130			

LCS Dup (B225792-BS1)

Prepared: 03/14/19 Analyzed: 03/16/19

Acenaphthene	1.45	0.17	mg/Kg wet	1.67		87.0	40-140	0.784	30	
Acenaphthylene	1.48	0.17	mg/Kg wet	1.67		88.8	40-140	3.43	30	
Acetophenone	1.43	0.34	mg/Kg wet	1.67		85.9	40-140	12.5	30	
Aniline	0.835	0.34	mg/Kg wet	1.67		50.1	40-140	6.89	30	V-34
Anthracene	1.60	0.17	mg/Kg wet	1.67		96.1	40-140	1.94	30	
Benzo(a)anthracene	1.53	0.17	mg/Kg wet	1.67		92.0	40-140	1.45	30	
Benzo(a)pyrene	1.66	0.17	mg/Kg wet	1.67		99.5	40-140	3.69	30	
Benzo(b)fluoranthene	1.53	0.17	mg/Kg wet	1.67		91.9	40-140	3.61	30	
Benzo(g,h,i)perylene	1.83	0.17	mg/Kg wet	1.67		110	40-140	0.273	30	
Benzo(k)fluoranthene	1.58	0.17	mg/Kg wet	1.67		95.0	40-140	1.17	30	
Bis(2-chloroethoxy)methane	1.76	0.34	mg/Kg wet	1.67		105	40-140	5.84	30	
Bis(2-chloroethyl)ether	1.57	0.34	mg/Kg wet	1.67		94.3	40-140	13.1	30	
Bis(2-chloroisopropyl)ether	1.78	0.34	mg/Kg wet	1.67		107	40-140	15.4	30	
Bis(2-Ethylhexyl)phthalate	1.65	0.34	mg/Kg wet	1.67		98.7	40-140	1.23	30	
4-Bromophenylphenylether	1.65	0.34	mg/Kg wet	1.67		98.7	40-140	3.76	30	
Butylbenzylphthalate	1.74	0.34	mg/Kg wet	1.67		104	40-140	5.66	30	
4-Chloroaniline	0.697	0.66	mg/Kg wet	1.67		41.8	15-140	4.55	30	V-34 †
2-Chloronaphthalene	1.29	0.34	mg/Kg wet	1.67		77.5	40-140	0.751	30	
2-Chlorophenol	1.54	0.34	mg/Kg wet	1.67		92.2	30-130	10.3	30	
Chrysene	1.54	0.17	mg/Kg wet	1.67		92.4	40-140	5.21	30	
Dibenz(a,h)anthracene	1.72	0.17	mg/Kg wet	1.67		103	40-140	1.15	30	V-06
Dibenzofuran	1.54	0.34	mg/Kg wet	1.67		92.1	40-140	9.71	30	
Di-n-butylphthalate	1.59	0.34	mg/Kg wet	1.67		95.7	40-140	4.09	30	
1,2-Dichlorobenzene	1.38	0.34	mg/Kg wet	1.67		82.8	40-140	13.4	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 B225792 - SW-846 3546**

**LCS Dup (B225792-BSD1)**

Prepared: 03/14/19 Analyzed: 03/16/19

1,3-Dichlorobenzene	1.34	0.34	mg/Kg wet	1.67		80.2	40-140	12.2	30	
1,4-Dichlorobenzene	1.35	0.34	mg/Kg wet	1.67		81.2	40-140	13.2	30	
3,3-Dichlorobenzidine	1.18	0.17	mg/Kg wet	1.67		70.8	40-140	0.652	30	
2,4-Dichlorophenol	1.64	0.34	mg/Kg wet	1.67		98.6	30-130	3.15	30	
Diethylphthalate	1.55	0.34	mg/Kg wet	1.67		93.3	40-140	9.21	30	
2,4-Dimethylphenol	1.60	0.34	mg/Kg wet	1.67		96.2	30-130	2.65	30	
Dimethylphthalate	1.59	0.34	mg/Kg wet	1.67		95.2	40-140	1.36	30	
2,4-Dinitrophenol	1.53	0.66	mg/Kg wet	1.67		91.6	15-140	10.8	30	†
2,4-Dinitrotoluene	1.52	0.34	mg/Kg wet	1.67		90.9	40-140	2.86	30	
2,6-Dinitrotoluene	1.56	0.34	mg/Kg wet	1.67		93.6	40-140	4.08	30	
Di-n-octylphthalate	1.61	0.34	mg/Kg wet	1.67		96.5	40-140	1.79	30	
1,2-Diphenylhydrazine/Azobenzene	1.56	0.34	mg/Kg wet	1.67		93.4	40-140	2.81	30	
Fluoranthene	1.56	0.17	mg/Kg wet	1.67		93.5	40-140	5.64	30	
Fluorene	1.53	0.17	mg/Kg wet	1.67		91.9	40-140	8.17	30	
Hexachlorobenzene	1.57	0.34	mg/Kg wet	1.67		94.4	40-140	2.82	30	
Hexachlorobutadiene	1.44	0.34	mg/Kg wet	1.67		86.3	40-140	13.7	30	
Hexachloroethane	1.35	0.34	mg/Kg wet	1.67		80.8	40-140	14.4	30	
Indeno(1,2,3-cd)pyrene	1.77	0.17	mg/Kg wet	1.67		106	40-140	0.225	30	
Isophorone	1.56	0.34	mg/Kg wet	1.67		93.8	40-140	5.90	30	
2-Methylnaphthalene	1.56	0.17	mg/Kg wet	1.67		93.7	40-140	9.04	30	
2-Methylphenol	1.53	0.34	mg/Kg wet	1.67		91.5	30-130	10.6	30	
3/4-Methylphenol	1.48	0.34	mg/Kg wet	1.67		88.6	30-130	7.84	30	
Naphthalene	1.49	0.17	mg/Kg wet	1.67		89.4	40-140	11.5	30	
Nitrobenzene	1.44	0.34	mg/Kg wet	1.67		86.7	40-140	8.44	30	
2-Nitrophenol	1.56	0.34	mg/Kg wet	1.67		93.5	30-130	9.10	30	
4-Nitrophenol	1.38	0.66	mg/Kg wet	1.67		83.0	15-140	6.26	30	†
Pentachlorophenol	1.70	0.34	mg/Kg wet	1.67		102	30-130	8.01	30	
Phenanthrene	1.58	0.17	mg/Kg wet	1.67		95.0	40-140	3.39	30	
Phenol	1.55	0.34	mg/Kg wet	1.67		93.2	15-140	8.40	30	†
Pyrene	1.71	0.17	mg/Kg wet	1.67		103	40-140	7.30	30	
Pyridine	1.18	0.34	mg/Kg wet	1.67		70.7	30-140	13.7	30	†
1,2,4-Trichlorobenzene	1.44	0.34	mg/Kg wet	1.67		86.5	40-140	10.7	30	
2,4,5-Trichlorophenol	1.56	0.34	mg/Kg wet	1.67		93.4	30-130	6.46	30	
2,4,6-Trichlorophenol	1.60	0.34	mg/Kg wet	1.67		95.8	30-130	7.23	30	
Surrogate: 2-Fluorophenol	6.33		mg/Kg wet	6.67		94.9	30-130			
Surrogate: Phenol-d6	6.34		mg/Kg wet	6.67		95.1	30-130			
Surrogate: Nitrobenzene-d5	3.11		mg/Kg wet	3.33		93.2	30-130			
Surrogate: 2-Fluorobiphenyl	3.23		mg/Kg wet	3.33		96.8	30-130			
Surrogate: 2,4,6-Tribromophenol	7.13		mg/Kg wet	6.67		107	30-130			
Surrogate: p-Terphenyl-d14	3.75		mg/Kg wet	3.33		113	30-130			

**Matrix Spike (B225792-MS1)**

**Source: 19C0442-04**

Prepared: 03/14/19 Analyzed: 03/16/19

**RL-08**

Acenaphthene	1.55	1.0	mg/Kg dry	2.01	ND	77.1	40-140			
Acenaphthylene	1.64	1.0	mg/Kg dry	2.01	ND	81.6	40-140			
Acetophenone	1.36	2.1	mg/Kg dry	2.01	ND	67.4	40-140			
<b>Aniline</b>	0.563	2.1	mg/Kg dry	2.01	ND	<b>28.0</b>	* 40-140			MS-09, MS-09
<b>Anthracene</b>	2.03	1.0	mg/Kg dry	2.01	1.45	<b>28.8</b>	* 40-140			MS-09, MS-09
<b>Benzo(a)anthracene</b>	2.70	1.0	mg/Kg dry	2.01	3.49	<b>-39.6</b>	* 40-140			MS-09, MS-09
<b>Benzo(a)pyrene</b>	2.77	1.0	mg/Kg dry	2.01	3.18	<b>-20.5</b>	* 40-140			MS-09, MS-09
<b>Benzo(b)fluoranthene</b>	2.75	1.0	mg/Kg dry	2.01	3.83	<b>-53.4</b>	* 40-140			MS-09, MS-09
Benzo(g,h,i)perylene	2.40	1.0	mg/Kg dry	2.01	1.35	52.7	40-140			
<b>Benzo(k)fluoranthene</b>	2.06	1.0	mg/Kg dry	2.01	1.38	<b>33.7</b>	* 40-140			MS-09, MS-09

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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
<b>Batch B225792 - SW-846 3546</b>										
<b>Matrix Spike (B225792-MS1)</b>	<b>Source: 19C0442-04</b>				Prepared: 03/14/19 Analyzed: 03/16/19			<b>RL-08</b>		
Bis(2-chloroethoxy)methane	1.70	2.1	mg/Kg dry	2.01	ND	84.7	40-140			
Bis(2-chloroethyl)ether	1.64	2.1	mg/Kg dry	2.01	ND	81.5	40-140			
Bis(2-chloroisopropyl)ether	1.72	2.1	mg/Kg dry	2.01	ND	85.6	40-140			
Bis(2-Ethylhexyl)phthalate	1.61	2.1	mg/Kg dry	2.01	ND	80.2	40-140			
4-Bromophenylphenylether	1.55	2.1	mg/Kg dry	2.01	ND	77.2	40-140			
Butylbenzylphthalate	1.71	2.1	mg/Kg dry	2.01	ND	85.2	40-140			
4-Chloroaniline	0.869	4.0	mg/Kg dry	2.01	ND	43.2	40-140			V-34
2-Chloronaphthalene	1.31	2.1	mg/Kg dry	2.01	ND	65.2	40-140			
2-Chlorophenol	1.47	2.1	mg/Kg dry	2.01	ND	72.9	30-130			
<b>Chrysene</b>	2.67	1.0	mg/Kg dry	2.01	3.21	-27.1 *	40-140			MS-09, MS-09
Dibenz(a,h)anthracene	1.68	1.0	mg/Kg dry	2.01	ND	83.7	40-140			V-06
Dibenzofuran	1.61	2.1	mg/Kg dry	2.01	ND	79.9	40-140			
Di-n-butylphthalate	1.64	2.1	mg/Kg dry	2.01	ND	81.7	40-140			
1,2-Dichlorobenzene	1.36	2.1	mg/Kg dry	2.01	ND	67.5	40-140			
1,3-Dichlorobenzene	1.30	2.1	mg/Kg dry	2.01	ND	64.6	40-140			
1,4-Dichlorobenzene	1.34	2.1	mg/Kg dry	2.01	ND	66.6	40-140			
3,3-Dichlorobenzidine	1.14	1.0	mg/Kg dry	2.01	ND	56.6	40-140			
2,4-Dichlorophenol	1.49	2.1	mg/Kg dry	2.01	ND	74.2	30-130			
Diethylphthalate	1.55	2.1	mg/Kg dry	2.01	ND	76.9	40-140			
2,4-Dimethylphenol	1.42	2.1	mg/Kg dry	2.01	ND	70.6	30-130			
Dimethylphthalate	1.58	2.1	mg/Kg dry	2.01	ND	78.7	40-140			
2,4-Dinitrophenol	1.93	4.0	mg/Kg dry	2.01	ND	96.1	30-130			
2,4-Dinitrotoluene	1.37	2.1	mg/Kg dry	2.01	ND	68.3	40-140			
2,6-Dinitrotoluene	1.52	2.1	mg/Kg dry	2.01	ND	75.5	40-140			
Di-n-octylphthalate	1.70	2.1	mg/Kg dry	2.01	ND	84.4	40-140			
1,2-Diphenylhydrazine/Azobenzene	1.53	2.1	mg/Kg dry	2.01	ND	76.1	40-140			
<b>Fluoranthene</b>	4.66	1.0	mg/Kg dry	2.01	8.37	-185 *	40-140			MS-09, MS-09, R-06
Fluorene	1.74	1.0	mg/Kg dry	2.01	ND	86.7	40-140			
Hexachlorobenzene	1.51	2.1	mg/Kg dry	2.01	ND	75.1	40-140			
Hexachlorobutadiene	1.47	2.1	mg/Kg dry	2.01	ND	73.1	40-140			
Hexachloroethane	1.32	2.1	mg/Kg dry	2.01	ND	65.6	40-140			
<b>Indeno(1,2,3-cd)pyrene</b>	2.36	1.0	mg/Kg dry	2.01	1.60	37.9 *	40-140			MS-09, MS-09
Isophorone	1.53	2.1	mg/Kg dry	2.01	ND	76.0	40-140			
2-Methylnaphthalene	1.59	1.0	mg/Kg dry	2.01	ND	79.3	40-140			
2-Methylphenol	1.36	2.1	mg/Kg dry	2.01	ND	67.5	30-130			
3/4-Methylphenol	1.30	2.1	mg/Kg dry	2.01	ND	64.8	30-130			
Naphthalene	1.58	1.0	mg/Kg dry	2.01	ND	78.6	40-140			
Nitrobenzene	1.47	2.1	mg/Kg dry	2.01	ND	72.9	40-140			
2-Nitrophenol	1.55	2.1	mg/Kg dry	2.01	ND	77.3	30-130			
4-Nitrophenol	1.10	4.0	mg/Kg dry	2.01	ND	54.9	30-130			
Pentachlorophenol	1.14	2.1	mg/Kg dry	2.01	ND	56.5	30-130			
<b>Phenanthrene</b>	3.45	1.0	mg/Kg dry	2.01	4.84	-69.2 *	40-140			MS-09, MS-09, R-06
Phenol	1.43	2.1	mg/Kg dry	2.01	ND	71.3	30-130			
<b>Pyrene</b>	4.20	1.0	mg/Kg dry	2.01	7.94	-186 *	40-140			MS-09, MS-09, R-06
1,2,4-Trichlorobenzene	1.46	2.1	mg/Kg dry	2.01	ND	72.7	40-140			
2,4,5-Trichlorophenol	1.39	2.1	mg/Kg dry	2.01	ND	69.1	30-130			
2,4,6-Trichlorophenol	1.53	2.1	mg/Kg dry	2.01	ND	75.9	30-130			
Surrogate: 2-Fluorophenol	5.90		mg/Kg dry	8.04		73.4	30-130			
Surrogate: Phenol-d6	5.85		mg/Kg dry	8.04		72.8	30-130			
Surrogate: Nitrobenzene-d5	3.10		mg/Kg dry	4.02		77.2	30-130			



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	
<b>Batch B225792 - SW-846 3546</b>											
<b>Matrix Spike (B225792-MS1)</b>		<b>Source: 19C0442-04</b>			Prepared: 03/14/19 Analyzed: 03/16/19			<b>RL-08</b>			
Surrogate: 2-Fluorobiphenyl	3.34		mg/Kg dry	4.02		82.9	30-130				
Surrogate: 2,4,6-Tribromophenol	6.41		mg/Kg dry	8.04		79.6	30-130				
Surrogate: p-Terphenyl-d14	3.64		mg/Kg dry	4.02		90.4	30-130				
<b>Matrix Spike Dup (B225792-MSD1)</b>		<b>Source: 19C0442-04</b>			Prepared: 03/14/19 Analyzed: 03/16/19			<b>RL-08</b>			
Acenaphthene	1.40	1.0	mg/Kg dry	1.98	ND	71.0	40-140	9.89	30		
Acenaphthylene	1.51	1.0	mg/Kg dry	1.98	ND	76.4	40-140	8.23	30		
Acetophenone	1.30	2.0	mg/Kg dry	1.98	ND	65.8	40-140	4.05	30		
Aniline	0.641	2.0	mg/Kg dry	1.98	ND	<b>32.4</b>	* 40-140	12.9	30	MS-09, MS-09	
Anthracene	1.66	1.0	mg/Kg dry	1.98	1.45	<b>10.2</b>	* 40-140	20.5	30	MS-09, MS-09	
Benzo(a)anthracene	2.11	1.0	mg/Kg dry	1.98	3.49	<b>-69.9</b>	* 40-140	24.4	30	MS-09, MS-09	
Benzo(a)pyrene	2.13	1.0	mg/Kg dry	1.98	3.18	<b>-53.0</b>	* 40-140	26.0	30	MS-09, MS-09	
Benzo(b)fluoranthene	2.09	1.0	mg/Kg dry	1.98	3.83	<b>-87.8</b>	* 40-140	27.4	30	MS-09, MS-09	
Benzo(g,h,i)perylene	1.80	1.0	mg/Kg dry	1.98	1.35	<b>22.9</b>	* 40-140	28.9	30	MS-22, MS-22	
Benzo(k)fluoranthene	1.64	1.0	mg/Kg dry	1.98	1.38	<b>12.9</b>	* 40-140	22.9	30	MS-09, MS-09	
Bis(2-chloroethoxy)methane	1.67	2.0	mg/Kg dry	1.98	ND	84.3	40-140	2.13	30		
Bis(2-chloroethyl)ether	1.52	2.0	mg/Kg dry	1.98	ND	76.8	40-140	7.59	30		
Bis(2-chloroisopropyl)ether	1.68	2.0	mg/Kg dry	1.98	ND	85.2	40-140	2.12	30		
Bis(2-Ethylhexyl)phthalate	1.65	2.0	mg/Kg dry	1.98	ND	83.6	40-140	2.50	30		
4-Bromophenylphenylether	1.51	2.0	mg/Kg dry	1.98	ND	76.1	40-140	3.09	30		
Butylbenzylphthalate	1.80	2.0	mg/Kg dry	1.98	ND	90.9	40-140	4.82	30		
4-Chloroaniline	0.848	3.9	mg/Kg dry	1.98	ND	42.9	40-140	2.35	30	V-34	
2-Chloronaphthalene	1.19	2.0	mg/Kg dry	1.98	ND	60.1	40-140	9.79	30		
2-Chlorophenol	1.46	2.0	mg/Kg dry	1.98	ND	73.9	30-130	0.291	30		
Chrysene	2.02	1.0	mg/Kg dry	1.98	3.21	<b>-60.4</b>	* 40-140	27.8	30	MS-09, MS-09	
Dibenz(a,h)anthracene	1.37	1.0	mg/Kg dry	1.98	ND	69.2	40-140	20.6	30	V-06	
Dibenzofuran	1.49	2.0	mg/Kg dry	1.98	ND	75.2	40-140	7.71	30		
Di-n-butylphthalate	1.55	2.0	mg/Kg dry	1.98	ND	78.5	40-140	5.65	30		
1,2-Dichlorobenzene	1.27	2.0	mg/Kg dry	1.98	ND	64.1	40-140	6.82	30		
1,3-Dichlorobenzene	1.25	2.0	mg/Kg dry	1.98	ND	63.4	40-140	3.53	30		
1,4-Dichlorobenzene	1.27	2.0	mg/Kg dry	1.98	ND	64.2	40-140	5.32	30		
3,3-Dichlorobenzidine	1.27	1.0	mg/Kg dry	1.98	ND	64.4	40-140	11.2	30		
2,4-Dichlorophenol	1.39	2.0	mg/Kg dry	1.98	ND	70.1	30-130	7.33	30		
Diethylphthalate	1.49	2.0	mg/Kg dry	1.98	ND	75.5	40-140	3.49	30		
2,4-Dimethylphenol	1.38	2.0	mg/Kg dry	1.98	ND	69.8	30-130	2.79	30		
Dimethylphthalate	1.49	2.0	mg/Kg dry	1.98	ND	75.1	40-140	6.33	30		
2,4-Dinitrophenol	1.69	3.9	mg/Kg dry	1.98	ND	85.3	30-130		30		
2,4-Dinitrotoluene	1.35	2.0	mg/Kg dry	1.98	ND	68.5	40-140	1.36	30		
2,6-Dinitrotoluene	1.41	2.0	mg/Kg dry	1.98	ND	71.4	40-140	7.23	30		
Di-n-octylphthalate	1.51	2.0	mg/Kg dry	1.98	ND	76.2	40-140	11.9	30		
1,2-Diphenylhydrazine/Azobenzene	1.36	2.0	mg/Kg dry	1.98	ND	68.7	40-140	11.9	30		
Fluoranthene	2.82	1.0	mg/Kg dry	1.98	8.37	<b>-281</b>	* 40-140	<b>49.2</b>	* 30	MS-09, R-06, MS-09, R-06	
Fluorene	1.52	1.0	mg/Kg dry	1.98	ND	77.0	40-140	13.5	30		
Hexachlorobenzene	1.35	2.0	mg/Kg dry	1.98	ND	68.3	40-140	11.1	30		
Hexachlorobutadiene	1.39	2.0	mg/Kg dry	1.98	ND	70.3	40-140	5.56	30		
Hexachloroethane	1.27	2.0	mg/Kg dry	1.98	ND	64.0	40-140	4.12	30		
Indeno(1,2,3-cd)pyrene	1.80	1.0	mg/Kg dry	1.98	1.60	<b>10.1</b>	* 40-140	27.0	30	MS-09, MS-09	
Isophorone	1.51	2.0	mg/Kg dry	1.98	ND	76.3	40-140	1.26	30		
2-Methylnaphthalene	1.49	1.0	mg/Kg dry	1.98	ND	75.2	40-140	6.96	30		
2-Methylphenol	1.33	2.0	mg/Kg dry	1.98	ND	67.2	30-130	2.10	30		
3/4-Methylphenol	1.25	2.0	mg/Kg dry	1.98	ND	63.4	30-130	3.84	30		
Naphthalene	1.50	1.0	mg/Kg dry	1.98	ND	76.0	40-140	5.02	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
<b>Batch B225792 - SW-846 3546</b>										
<b>Matrix Spike Dup (B225792-MSD1)</b>	<b>Source: 19C0442-04</b>				Prepared: 03/14/19 Analyzed: 03/16/19				<b>RL-08</b>	
Nitrobenzene	1.43	2.0	mg/Kg dry	1.98	ND	72.1	40-140	2.76	30	
2-Nitrophenol	1.40	2.0	mg/Kg dry	1.98	ND	71.0	30-130	10.1	30	
4-Nitrophenol	1.17	3.9	mg/Kg dry	1.98	ND	59.1	30-130		30	
Pentachlorophenol	1.03	2.0	mg/Kg dry	1.98	ND	52.3	30-130		30	
<b>Phenanthrene</b>	2.10	1.0	mg/Kg dry	1.98	4.84	<b>-139 *</b>	40-140	<b>48.9 *</b>	30	MS-09, R-06, MS-09, RL-06
Phenol	1.43	2.0	mg/Kg dry	1.98	ND	72.1	30-130	0.537	30	
<b>Pyrene</b>	3.00	1.0	mg/Kg dry	1.98	7.94	<b>-250 *</b>	40-140	<b>33.6 *</b>	30	MS-09, R-06, MS-09, RL-06
1,2,4-Trichlorobenzene	1.38	2.0	mg/Kg dry	1.98	ND	69.9	40-140	5.58	30	
2,4,5-Trichlorophenol	1.20	2.0	mg/Kg dry	1.98	ND	60.9	30-130	14.3	30	
2,4,6-Trichlorophenol	1.40	2.0	mg/Kg dry	1.98	ND	70.6	30-130	8.89	30	
Surrogate: 2-Fluorophenol	5.77		mg/Kg dry	7.91		72.9	30-130			
Surrogate: Phenol-d6	5.69		mg/Kg dry	7.91		71.9	30-130			
Surrogate: Nitrobenzene-d5	2.98		mg/Kg dry	3.96		75.4	30-130			
Surrogate: 2-Fluorobiphenyl	3.09		mg/Kg dry	3.96		78.2	30-130			
Surrogate: 2,4,6-Tribromophenol	6.29		mg/Kg dry	7.91		79.5	30-130			
Surrogate: p-Terphenyl-d14	3.53		mg/Kg dry	3.96		89.3	30-130			

**Batch B225793 - SW-846 3546**

<b>Blank (B225793-BLK1)</b>										
Prepared: 03/14/19 Analyzed: 03/15/19										
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							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							
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							
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							
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							
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							
2,4-Dinitrophenol	ND	0.66	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
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**Batch B225793 - SW-846 3546**

**Blank (B225793-BLK1)**

Prepared: 03/14/19 Analyzed: 03/15/19

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							
1,2-Diphenylhydrazine/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							
Phenol	ND	0.34	mg/Kg wet							
Pyrene	ND	0.17	mg/Kg wet							
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	5.27		mg/Kg wet	6.67		79.0	30-130			
Surrogate: Phenol-d6	5.27		mg/Kg wet	6.67		79.1	30-130			
Surrogate: Nitrobenzene-d5	2.61		mg/Kg wet	3.33		78.3	30-130			
Surrogate: 2-Fluorobiphenyl	2.94		mg/Kg wet	3.33		88.2	30-130			
Surrogate: 2,4,6-Tribromophenol	6.74		mg/Kg wet	6.67		101	30-130			
Surrogate: p-Terphenyl-d14	3.11		mg/Kg wet	3.33		93.2	30-130			

**LCS (B225793-BS1)**

Prepared: 03/14/19 Analyzed: 03/15/19

Acenaphthene	1.34	0.17	mg/Kg wet	1.67		80.2	40-140			
Acenaphthylene	1.40	0.17	mg/Kg wet	1.67		83.7	40-140			
Acetophenone	1.26	0.34	mg/Kg wet	1.67		75.7	40-140			
Aniline	1.02	0.34	mg/Kg wet	1.67		61.3	40-140			V-34
Anthracene	1.48	0.17	mg/Kg wet	1.67		88.7	40-140			
Benzo(a)anthracene	1.39	0.17	mg/Kg wet	1.67		83.3	40-140			
Benzo(a)pyrene	1.52	0.17	mg/Kg wet	1.67		91.3	40-140			
Benzo(b)fluoranthene	1.42	0.17	mg/Kg wet	1.67		85.0	40-140			
Benzo(g,h,i)perylene	1.62	0.17	mg/Kg wet	1.67		97.5	40-140			
Benzo(k)fluoranthene	1.41	0.17	mg/Kg wet	1.67		84.5	40-140			
Bis(2-chloroethoxy)methane	1.56	0.34	mg/Kg wet	1.67		93.6	40-140			
Bis(2-chloroethyl)ether	1.36	0.34	mg/Kg wet	1.67		81.4	40-140			
Bis(2-chloroisopropyl)ether	1.48	0.34	mg/Kg wet	1.67		88.7	40-140			
Bis(2-Ethylhexyl)phthalate	1.44	0.34	mg/Kg wet	1.67		86.4	40-140			
4-Bromophenylphenylether	1.50	0.34	mg/Kg wet	1.67		89.8	40-140			
Butylbenzylphthalate	1.42	0.34	mg/Kg wet	1.67		85.3	40-140			
4-Chloroaniline	1.04	0.66	mg/Kg wet	1.67		62.2	15-140			V-34 †
2-Chloronaphthalene	1.26	0.34	mg/Kg wet	1.67		75.4	40-140			
2-Chlorophenol	1.37	0.34	mg/Kg wet	1.67		82.2	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
<b>Batch B225793 - SW-846 3546</b>										
<b>LCS (B225793-BS1)</b>										
					Prepared: 03/14/19 Analyzed: 03/15/19					
Chrysene	1.43	0.17	mg/Kg wet	1.67		85.9	40-140			
Dibenz(a,h)anthracene	1.62	0.17	mg/Kg wet	1.67		97.0	40-140			
Dibenzofuran	1.42	0.34	mg/Kg wet	1.67		85.3	40-140			
Di-n-butylphthalate	1.44	0.34	mg/Kg wet	1.67		86.6	40-140			
1,2-Dichlorobenzene	1.21	0.34	mg/Kg wet	1.67		72.8	40-140			
1,3-Dichlorobenzene	1.20	0.34	mg/Kg wet	1.67		71.7	40-140			
1,4-Dichlorobenzene	1.19	0.34	mg/Kg wet	1.67		71.6	40-140			
3,3-Dichlorobenzidine	1.42	0.17	mg/Kg wet	1.67		85.4	40-140			
2,4-Dichlorophenol	1.46	0.34	mg/Kg wet	1.67		87.5	30-130			
Diethylphthalate	1.42	0.34	mg/Kg wet	1.67		84.9	40-140			
2,4-Dimethylphenol	1.46	0.34	mg/Kg wet	1.67		87.5	30-130			
Dimethylphthalate	1.44	0.34	mg/Kg wet	1.67		86.2	40-140			
2,4-Dinitrophenol	1.54	0.66	mg/Kg wet	1.67		92.6	15-140			†
2,4-Dinitrotoluene	1.41	0.34	mg/Kg wet	1.67		84.4	40-140			
2,6-Dinitrotoluene	1.43	0.34	mg/Kg wet	1.67		85.5	40-140			
Di-n-octylphthalate	1.38	0.34	mg/Kg wet	1.67		82.8	40-140			
1,2-Diphenylhydrazine/Azobenzene	1.36	0.34	mg/Kg wet	1.67		81.7	40-140			
Fluoranthene	1.49	0.17	mg/Kg wet	1.67		89.2	40-140			
Fluorene	1.43	0.17	mg/Kg wet	1.67		85.8	40-140			
Hexachlorobenzene	1.48	0.34	mg/Kg wet	1.67		88.5	40-140			
Hexachlorobutadiene	1.27	0.34	mg/Kg wet	1.67		76.5	40-140			
Hexachloroethane	1.18	0.34	mg/Kg wet	1.67		70.5	40-140			
Indeno(1,2,3-cd)pyrene	1.51	0.17	mg/Kg wet	1.67		90.5	40-140			
Isophorone	1.38	0.34	mg/Kg wet	1.67		82.9	40-140			
2-Methylnaphthalene	1.41	0.17	mg/Kg wet	1.67		84.6	40-140			
2-Methylphenol	1.36	0.34	mg/Kg wet	1.67		81.9	30-130			
3/4-Methylphenol	1.28	0.34	mg/Kg wet	1.67		76.8	30-130			
Naphthalene	1.35	0.17	mg/Kg wet	1.67		80.8	40-140			
Nitrobenzene	1.26	0.34	mg/Kg wet	1.67		75.6	40-140			
2-Nitrophenol	1.42	0.34	mg/Kg wet	1.67		85.4	30-130			
4-Nitrophenol	1.45	0.66	mg/Kg wet	1.67		86.7	15-140			†
Pentachlorophenol	1.62	0.34	mg/Kg wet	1.67		97.2	30-130			
Phenanthrene	1.45	0.17	mg/Kg wet	1.67		87.3	40-140			
Phenol	1.40	0.34	mg/Kg wet	1.67		84.3	15-140			†
Pyrene	1.41	0.17	mg/Kg wet	1.67		84.7	40-140			
1,2,4-Trichlorobenzene	1.33	0.34	mg/Kg wet	1.67		79.6	40-140			
2,4,5-Trichlorophenol	1.42	0.34	mg/Kg wet	1.67		85.4	30-130			
2,4,6-Trichlorophenol	1.46	0.34	mg/Kg wet	1.67		87.5	30-130			
Surrogate: 2-Fluorophenol	5.47		mg/Kg wet	6.67		82.0	30-130			
Surrogate: Phenol-d6	5.63		mg/Kg wet	6.67		84.4	30-130			
Surrogate: Nitrobenzene-d5	2.68		mg/Kg wet	3.33		80.5	30-130			
Surrogate: 2-Fluorobiphenyl	3.00		mg/Kg wet	3.33		89.9	30-130			
Surrogate: 2,4,6-Tribromophenol	6.86		mg/Kg wet	6.67		103	30-130			
Surrogate: p-Terphenyl-d14	3.12		mg/Kg wet	3.33		93.5	30-130			

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

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 B225793 - SW-846 3546

LCS Dup (B225793-BSD1)

Prepared: 03/14/19 Analyzed: 03/15/19

Acenaphthene	1.41	0.17	mg/Kg wet	1.67		84.5	40-140	5.15	30	
Acenaphthylene	1.45	0.17	mg/Kg wet	1.67		86.9	40-140	3.73	30	
Acetophenone	1.28	0.34	mg/Kg wet	1.67		77.0	40-140	1.62	30	
Aniline	0.936	0.34	mg/Kg wet	1.67		56.1	40-140	8.82	30	V-34
Anthracene	1.58	0.17	mg/Kg wet	1.67		94.7	40-140	6.50	30	
Benzo(a)anthracene	1.50	0.17	mg/Kg wet	1.67		89.8	40-140	7.48	30	
Benzo(a)pyrene	1.63	0.17	mg/Kg wet	1.67		97.5	40-140	6.65	30	
Benzo(b)fluoranthene	1.51	0.17	mg/Kg wet	1.67		90.9	40-140	6.64	30	
Benzo(g,h,i)perylene	1.73	0.17	mg/Kg wet	1.67		104	40-140	6.18	30	
Benzo(k)fluoranthene	1.56	0.17	mg/Kg wet	1.67		93.8	40-140	10.4	30	
Bis(2-chloroethoxy)methane	1.59	0.34	mg/Kg wet	1.67		95.3	40-140	1.84	30	
Bis(2-chloroethyl)ether	1.39	0.34	mg/Kg wet	1.67		83.6	40-140	2.62	30	
Bis(2-chloroisopropyl)ether	1.48	0.34	mg/Kg wet	1.67		89.1	40-140	0.360	30	
Bis(2-Ethylhexyl)phthalate	1.56	0.34	mg/Kg wet	1.67		93.8	40-140	8.24	30	
4-Bromophenylphenylether	1.58	0.34	mg/Kg wet	1.67		94.8	40-140	5.42	30	
Butylbenzylphthalate	1.56	0.34	mg/Kg wet	1.67		93.6	40-140	9.24	30	
4-Chloroaniline	0.939	0.66	mg/Kg wet	1.67		56.3	15-140	9.92	30	V-34 †
2-Chloronaphthalene	1.29	0.34	mg/Kg wet	1.67		77.5	40-140	2.72	30	
2-Chlorophenol	1.39	0.34	mg/Kg wet	1.67		83.5	30-130	1.59	30	
Chrysene	1.55	0.17	mg/Kg wet	1.67		93.1	40-140	8.04	30	
Dibenz(a,h)anthracene	1.54	0.17	mg/Kg wet	1.67		92.5	40-140	4.79	30	
Dibenzofuran	1.50	0.34	mg/Kg wet	1.67		90.2	40-140	5.58	30	
Di-n-butylphthalate	1.54	0.34	mg/Kg wet	1.67		92.5	40-140	6.61	30	
1,2-Dichlorobenzene	1.26	0.34	mg/Kg wet	1.67		75.4	40-140	3.43	30	
1,3-Dichlorobenzene	1.22	0.34	mg/Kg wet	1.67		73.4	40-140	2.40	30	
1,4-Dichlorobenzene	1.22	0.34	mg/Kg wet	1.67		73.2	40-140	2.24	30	
3,3-Dichlorobenzidine	1.39	0.17	mg/Kg wet	1.67		83.2	40-140	2.61	30	
2,4-Dichlorophenol	1.52	0.34	mg/Kg wet	1.67		91.5	30-130	4.45	30	
Diethylphthalate	1.52	0.34	mg/Kg wet	1.67		91.4	40-140	7.28	30	
2,4-Dimethylphenol	1.51	0.34	mg/Kg wet	1.67		90.9	30-130	3.72	30	
Dimethylphthalate	1.55	0.34	mg/Kg wet	1.67		93.1	40-140	7.72	30	
2,4-Dinitrophenol	1.63	0.66	mg/Kg wet	1.67		97.9	15-140	5.54	30	†
2,4-Dinitrotoluene	1.53	0.34	mg/Kg wet	1.67		91.6	40-140	8.13	30	
2,6-Dinitrotoluene	1.57	0.34	mg/Kg wet	1.67		94.5	40-140	9.93	30	
Di-n-octylphthalate	1.48	0.34	mg/Kg wet	1.67		88.6	40-140	6.82	30	
1,2-Diphenylhydrazine/Azobenzene	1.44	0.34	mg/Kg wet	1.67		86.4	40-140	5.59	30	
Fluoranthene	1.62	0.17	mg/Kg wet	1.67		97.2	40-140	8.54	30	
Fluorene	1.51	0.17	mg/Kg wet	1.67		90.6	40-140	5.35	30	
Hexachlorobenzene	1.54	0.34	mg/Kg wet	1.67		92.4	40-140	4.31	30	
Hexachlorobutadiene	1.27	0.34	mg/Kg wet	1.67		76.0	40-140	0.577	30	
Hexachloroethane	1.20	0.34	mg/Kg wet	1.67		72.0	40-140	2.13	30	
Indeno(1,2,3-cd)pyrene	1.64	0.17	mg/Kg wet	1.67		98.4	40-140	8.41	30	
Isophorone	1.41	0.34	mg/Kg wet	1.67		84.5	40-140	1.89	30	
2-Methylnaphthalene	1.44	0.17	mg/Kg wet	1.67		86.3	40-140	2.08	30	
2-Methylphenol	1.40	0.34	mg/Kg wet	1.67		83.7	30-130	2.25	30	
3/4-Methylphenol	1.34	0.34	mg/Kg wet	1.67		80.4	30-130	4.66	30	
Naphthalene	1.36	0.17	mg/Kg wet	1.67		81.8	40-140	1.25	30	
Nitrobenzene	1.29	0.34	mg/Kg wet	1.67		77.4	40-140	2.27	30	
2-Nitrophenol	1.42	0.34	mg/Kg wet	1.67		85.5	30-130	0.140	30	
4-Nitrophenol	1.50	0.66	mg/Kg wet	1.67		90.0	15-140	3.71	30	†
Pentachlorophenol	1.70	0.34	mg/Kg wet	1.67		102	30-130	5.02	30	
Phenanthrene	1.57	0.17	mg/Kg wet	1.67		94.3	40-140	7.69	30	

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
<b>Batch B225793 - SW-846 3546</b>										
<b>LCS Dup (B225793-BSD1)</b>										
					Prepared: 03/14/19 Analyzed: 03/15/19					
Phenol	1.42	0.34	mg/Kg wet	1.67		85.1	15-140	1.02	30	†
Pyrene	1.52	0.17	mg/Kg wet	1.67		91.2	40-140	7.41	30	
1,2,4-Trichlorobenzene	1.31	0.34	mg/Kg wet	1.67		78.4	40-140	1.49	30	
2,4,5-Trichlorophenol	1.53	0.34	mg/Kg wet	1.67		91.6	30-130	7.00	30	
2,4,6-Trichlorophenol	1.55	0.34	mg/Kg wet	1.67		92.9	30-130	6.05	30	
Surrogate: 2-Fluorophenol	5.52		mg/Kg wet	6.67		82.8	30-130			
Surrogate: Phenol-d6	5.66		mg/Kg wet	6.67		84.9	30-130			
Surrogate: Nitrobenzene-d5	2.67		mg/Kg wet	3.33		80.2	30-130			
Surrogate: 2-Fluorobiphenyl	3.04		mg/Kg wet	3.33		91.1	30-130			
Surrogate: 2,4,6-Tribromophenol	7.24		mg/Kg wet	6.67		109	30-130			
Surrogate: p-Terphenyl-d14	3.30		mg/Kg wet	3.33		98.9	30-130			
<b>Matrix Spike (B225793-MS1)</b>										
					Source: 19C0442-24					
					Prepared: 03/14/19 Analyzed: 03/15/19					
<b>RL-08</b>										
Acenaphthene	1.22	0.98	mg/Kg dry	1.92	ND	63.7	40-140			
Acenaphthylene	1.71	0.98	mg/Kg dry	1.92	ND	89.2	40-140			
Acetophenone	1.56	2.0	mg/Kg dry	1.92	ND	81.2	40-140			
Aniline	0.805	2.0	mg/Kg dry	1.92	ND	42.0	40-140			V-34
<b>Anthracene</b>	1.95	0.98	mg/Kg dry	1.92	1.24	36.7	40-140	*		MS-09
Benzo(a)anthracene	3.24	0.98	mg/Kg dry	1.92	1.38	97.2	40-140			
Benzo(a)pyrene	3.61	0.98	mg/Kg dry	1.92	1.54	108	40-140			
Benzo(b)fluoranthene	3.59	0.98	mg/Kg dry	1.92	1.81	93.1	40-140			
Benzo(g,h,i)perylene	2.40	0.98	mg/Kg dry	1.92	1.06	70.3	40-140			
Benzo(k)fluoranthene	2.30	0.98	mg/Kg dry	1.92	ND	120	40-140			
Bis(2-chloroethoxy)methane	1.61	2.0	mg/Kg dry	1.92	ND	83.8	40-140			
Bis(2-chloroethyl)ether	1.58	2.0	mg/Kg dry	1.92	ND	82.2	40-140			
Bis(2-chloroisopropyl)ether	1.55	2.0	mg/Kg dry	1.92	ND	80.8	40-140			
Bis(2-Ethylhexyl)phthalate	1.97	2.0	mg/Kg dry	1.92	ND	103	40-140			
4-Bromophenylphenylether	1.40	2.0	mg/Kg dry	1.92	ND	73.2	40-140			
Butylbenzylphthalate	1.99	2.0	mg/Kg dry	1.92	ND	104	40-140			
4-Chloroaniline	0.945	3.8	mg/Kg dry	1.92	ND	49.3	40-140			V-34
2-Chloronaphthalene	1.09	2.0	mg/Kg dry	1.92	ND	56.9	40-140			
2-Chlorophenol	1.43	2.0	mg/Kg dry	1.92	ND	74.7	30-130			
Chrysene	2.99	0.98	mg/Kg dry	1.92	1.30	88.3	40-140			
Dibenz(a,h)anthracene	1.32	0.98	mg/Kg dry	1.92	ND	68.7	40-140			
Dibenzofuran	1.34	2.0	mg/Kg dry	1.92	ND	69.8	40-140			
Di-n-butylphthalate	1.61	2.0	mg/Kg dry	1.92	ND	84.1	40-140			
1,2-Dichlorobenzene	1.44	2.0	mg/Kg dry	1.92	ND	75.1	40-140			
1,3-Dichlorobenzene	1.31	2.0	mg/Kg dry	1.92	ND	68.5	40-140			
1,4-Dichlorobenzene	1.37	2.0	mg/Kg dry	1.92	ND	71.6	40-140			
3,3-Dichlorobenzidine	1.20	0.98	mg/Kg dry	1.92	ND	62.5	40-140			
2,4-Dichlorophenol	1.40	2.0	mg/Kg dry	1.92	ND	73.3	30-130			
Diethylphthalate	1.44	2.0	mg/Kg dry	1.92	ND	75.0	40-140			
2,4-Dimethylphenol	1.40	2.0	mg/Kg dry	1.92	ND	73.2	30-130			
Dimethylphthalate	1.36	2.0	mg/Kg dry	1.92	ND	71.1	40-140			
<b>2,4-Dinitrophenol</b>	ND	3.8	mg/Kg dry	1.92	ND		30-130	*		V-05, MS-09
2,4-Dinitrotoluene	1.14	2.0	mg/Kg dry	1.92	ND	59.4	40-140			
2,6-Dinitrotoluene	1.30	2.0	mg/Kg dry	1.92	ND	67.9	40-140			
Di-n-octylphthalate	2.11	2.0	mg/Kg dry	1.92	ND	110	40-140			V-06
1,2-Diphenylhydrazine/Azobenzene	1.55	2.0	mg/Kg dry	1.92	ND	81.0	40-140			
Fluoranthene	4.90	0.98	mg/Kg dry	1.92	2.54	123	40-140			
Fluorene	1.44	0.98	mg/Kg dry	1.92	ND	74.9	40-140			
Hexachlorobenzene	1.42	2.0	mg/Kg dry	1.92	ND	74.0	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	
<b>Batch B225793 - SW-846 3546</b>											
<b>Matrix Spike (B225793-MS1)</b>	<b>Source: 19C0442-24</b>				Prepared: 03/14/19 Analyzed: 03/15/19			<b>RL-08</b>			
Hexachlorobutadiene	1.54	2.0	mg/Kg dry	1.92	ND	80.3	40-140				
Hexachloroethane	0.928	2.0	mg/Kg dry	1.92	ND	48.4	40-140				
Indeno(1,2,3-cd)pyrene	2.35	0.98	mg/Kg dry	1.92	1.12	63.7	40-140				
Isophorone	1.60	2.0	mg/Kg dry	1.92	ND	83.3	40-140				
2-Methylnaphthalene	1.63	0.98	mg/Kg dry	1.92	ND	85.3	40-140				
2-Methylphenol	1.34	2.0	mg/Kg dry	1.92	ND	69.7	30-130				
3/4-Methylphenol	1.39	2.0	mg/Kg dry	1.92	ND	72.4	30-130				
Naphthalene	1.45	0.98	mg/Kg dry	1.92	ND	75.4	40-140				
Nitrobenzene	1.58	2.0	mg/Kg dry	1.92	ND	82.6	40-140				
2-Nitrophenol	1.17	2.0	mg/Kg dry	1.92	ND	61.0	30-130				
<b>4-Nitrophenol</b>	ND	3.8	mg/Kg dry	1.92	ND	*	30-130			MS-09	
Pentachlorophenol	0.818	2.0	mg/Kg dry	1.92	ND	42.7	30-130			V-05	
Phenanthrene	3.24	0.98	mg/Kg dry	1.92	1.33	100	40-140				
Phenol	1.44	2.0	mg/Kg dry	1.92	ND	74.9	30-130				
<b>Pyrene</b>	5.83	0.98	mg/Kg dry	1.92	2.79	<b>158</b>	*	40-140		MS-22	
1,2,4-Trichlorobenzene	1.40	2.0	mg/Kg dry	1.92	ND	72.8	40-140				
2,4,5-Trichlorophenol	1.19	2.0	mg/Kg dry	1.92	ND	61.9	30-130				
2,4,6-Trichlorophenol	1.26	2.0	mg/Kg dry	1.92	ND	65.9	30-130				
Surrogate: 2-Fluorophenol	5.66		mg/Kg dry	7.67		73.8	30-130				
Surrogate: Phenol-d6	5.95		mg/Kg dry	7.67		77.6	30-130				
Surrogate: Nitrobenzene-d5	3.17		mg/Kg dry	3.83		82.8	30-130				
Surrogate: 2-Fluorobiphenyl	2.79		mg/Kg dry	3.83		72.8	30-130				
Surrogate: 2,4,6-Tribromophenol	5.69		mg/Kg dry	7.67		74.2	30-130				
Surrogate: p-Terphenyl-d14	3.67		mg/Kg dry	3.83		95.6	30-130				
<b>Matrix Spike Dup (B225793-MSD1)</b>	<b>Source: 19C0442-24</b>				Prepared: 03/14/19 Analyzed: 03/15/19			<b>RL-08</b>			
Acenaphthene	1.23	0.98	mg/Kg dry	1.92	ND	64.0	40-140	0.801	30		
Acenaphthylene	1.62	0.98	mg/Kg dry	1.92	ND	84.0	40-140	5.67	30		
Acetophenone	1.61	2.0	mg/Kg dry	1.92	ND	83.9	40-140	3.60	30		
Aniline	1.04	2.0	mg/Kg dry	1.92	ND	53.9	40-140	25.1	30	V-34	
<b>Anthracene</b>	1.86	0.98	mg/Kg dry	1.92	1.24	<b>32.1</b>	*	40-140	4.51	30	MS-09
Benzo(a)anthracene	2.92	0.98	mg/Kg dry	1.92	1.38	80.6	40-140	10.2	30		
Benzo(a)pyrene	3.07	0.98	mg/Kg dry	1.92	1.54	79.5	40-140	16.3	30		
Benzo(b)fluoranthene	3.13	0.98	mg/Kg dry	1.92	1.81	68.9	40-140	13.6	30		
Benzo(g,h,i)perylene	1.98	0.98	mg/Kg dry	1.92	1.06	48.1	40-140	19.3	30		
Benzo(k)fluoranthene	2.04	0.98	mg/Kg dry	1.92	ND	106	40-140	12.2	30		
Bis(2-chloroethoxy)methane	1.58	2.0	mg/Kg dry	1.92	ND	82.2	40-140	1.60	30		
Bis(2-chloroethyl)ether	1.55	2.0	mg/Kg dry	1.92	ND	80.5	40-140	1.76	30		
Bis(2-chloroisopropyl)ether	1.65	2.0	mg/Kg dry	1.92	ND	85.7	40-140	6.22	30		
Bis(2-Ethylhexyl)phthalate	2.08	2.0	mg/Kg dry	1.92	ND	108	40-140	5.55	30		
4-Bromophenylphenylether	1.41	2.0	mg/Kg dry	1.92	ND	73.5	40-140	0.741	30		
Butylbenzylphthalate	2.09	2.0	mg/Kg dry	1.92	ND	108	40-140	4.95	30		
4-Chloroaniline	0.863	3.8	mg/Kg dry	1.92	ND	44.9	40-140	9.01	30	V-34	
2-Chloronaphthalene	1.11	2.0	mg/Kg dry	1.92	ND	57.6	40-140	1.55	30		
2-Chlorophenol	1.53	2.0	mg/Kg dry	1.92	ND	79.4	30-130	6.43	30		
Chrysene	2.72	0.98	mg/Kg dry	1.92	1.30	74.2	40-140	9.28	30		
Dibenz(a,h)anthracene	1.29	0.98	mg/Kg dry	1.92	ND	67.0	40-140	2.17	30		
Dibenzofuran	1.38	2.0	mg/Kg dry	1.92	ND	71.6	40-140	2.88	30		
Di-n-butylphthalate	1.61	2.0	mg/Kg dry	1.92	ND	83.9	40-140	0.0936	30		
1,2-Dichlorobenzene	1.40	2.0	mg/Kg dry	1.92	ND	72.6	40-140	3.05	30		
1,3-Dichlorobenzene	1.44	2.0	mg/Kg dry	1.92	ND	74.8	40-140	9.12	30		
1,4-Dichlorobenzene	1.42	2.0	mg/Kg dry	1.92	ND	74.1	40-140	3.76	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
<b>Batch B225793 - SW-846 3546</b>										
<b>Matrix Spike Dup (B225793-MSD1)</b>	<b>Source: 19C0442-24</b>				Prepared: 03/14/19 Analyzed: 03/15/19				<b>RL-08</b>	
3,3-Dichlorobenzidine	1.24	0.98	mg/Kg dry	1.92	ND	64.4	40-140	3.33	30	
2,4-Dichlorophenol	1.37	2.0	mg/Kg dry	1.92	ND	71.1	30-130	2.72	30	
Diethylphthalate	1.45	2.0	mg/Kg dry	1.92	ND	75.5	40-140	0.996	30	
2,4-Dimethylphenol	1.41	2.0	mg/Kg dry	1.92	ND	73.5	30-130	0.741	30	
Dimethylphthalate	1.34	2.0	mg/Kg dry	1.92	ND	69.7	40-140	1.66	30	
<b>2,4-Dinitrophenol</b>	ND	3.8	mg/Kg dry	1.92	ND	*	30-130		30	MS-09, V-05
2,4-Dinitrotoluene	1.06	2.0	mg/Kg dry	1.92	ND	55.1	40-140	7.18	30	
2,6-Dinitrotoluene	1.27	2.0	mg/Kg dry	1.92	ND	66.2	40-140	2.20	30	
Di-n-octylphthalate	2.09	2.0	mg/Kg dry	1.92	ND	108	40-140	1.04	30	V-06
1,2-Diphenylhydrazine/Azobenzene	1.50	2.0	mg/Kg dry	1.92	ND	78.0	40-140	3.44	30	
Fluoranthene	4.22	0.98	mg/Kg dry	1.92	2.54	87.5	40-140	14.9	30	
Fluorene	1.44	0.98	mg/Kg dry	1.92	ND	74.9	40-140	0.332	30	
Hexachlorobenzene	1.39	2.0	mg/Kg dry	1.92	ND	72.4	40-140	1.85	30	
Hexachlorobutadiene	1.45	2.0	mg/Kg dry	1.92	ND	75.5	40-140	5.83	30	
Hexachloroethane	0.923	2.0	mg/Kg dry	1.92	ND	48.0	40-140	0.498	30	
Indeno(1,2,3-cd)pyrene	2.32	0.98	mg/Kg dry	1.92	1.12	62.2	40-140	1.07	30	
Isophorone	1.69	2.0	mg/Kg dry	1.92	ND	87.7	40-140	5.48	30	
2-Methylnaphthalene	1.53	0.98	mg/Kg dry	1.92	ND	79.8	40-140	6.33	30	
2-Methylphenol	1.38	2.0	mg/Kg dry	1.92	ND	71.9	30-130	3.44	30	
3/4-Methylphenol	1.48	2.0	mg/Kg dry	1.92	ND	77.2	30-130	6.75	30	
Naphthalene	1.51	0.98	mg/Kg dry	1.92	ND	78.7	40-140	4.61	30	
Nitrobenzene	1.56	2.0	mg/Kg dry	1.92	ND	81.2	40-140	1.38	30	
2-Nitrophenol	1.25	2.0	mg/Kg dry	1.92	ND	64.9	30-130	6.53	30	
<b>4-Nitrophenol</b>	ND	3.8	mg/Kg dry	1.92	ND	*	30-130	NC	30	MS-09
Pentachlorophenol	0.635	2.0	mg/Kg dry	1.92	ND	33.0	30-130		30	V-05
Phenanthrene	2.94	0.98	mg/Kg dry	1.92	1.33	84.1	40-140	9.73	30	
Phenol	1.47	2.0	mg/Kg dry	1.92	ND	76.5	30-130	2.45	30	
Pyrene	5.22	0.98	mg/Kg dry	1.92	2.79	126	40-140	11.0	30	
1,2,4-Trichlorobenzene	1.44	2.0	mg/Kg dry	1.92	ND	74.8	40-140	3.04	30	
2,4,5-Trichlorophenol	1.20	2.0	mg/Kg dry	1.92	ND	62.3	30-130	0.976	30	
2,4,6-Trichlorophenol	1.24	2.0	mg/Kg dry	1.92	ND	64.5	30-130	1.82	30	
Surrogate: 2-Fluorophenol	5.90		mg/Kg dry	7.69		76.7	30-130			
Surrogate: Phenol-d6	6.29		mg/Kg dry	7.69		81.8	30-130			
Surrogate: Nitrobenzene-d5	3.15		mg/Kg dry	3.85		81.8	30-130			
Surrogate: 2-Fluorobiphenyl	2.77		mg/Kg dry	3.85		72.1	30-130			
Surrogate: 2,4,6-Tribromophenol	5.42		mg/Kg dry	7.69		70.5	30-130			
Surrogate: p-Terphenyl-d14	3.69		mg/Kg dry	3.85		95.9	30-130			



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**QUALITY CONTROL**

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B225583 - SW-846 3540C</b>										
<b>Blank (B225583-BLK1)</b>										
Prepared: 03/13/19 Analyzed: 03/14/19										
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	0.194		mg/Kg wet	0.200		97.2	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.197		mg/Kg wet	0.200		98.3	30-150			
Surrogate: Tetrachloro-m-xylene	0.175		mg/Kg wet	0.200		87.5	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.172		mg/Kg wet	0.200		85.8	30-150			
<b>LCS (B225583-BS1)</b>										
Prepared: 03/13/19 Analyzed: 03/14/19										
Aroclor-1016	0.20	0.020	mg/Kg wet	0.200		98.0	40-140			
Aroclor-1016 [2C]	0.20	0.020	mg/Kg wet	0.200		99.0	40-140			
Aroclor-1260	0.18	0.020	mg/Kg wet	0.200		87.9	40-140			
Aroclor-1260 [2C]	0.16	0.020	mg/Kg wet	0.200		82.5	40-140			
Surrogate: Decachlorobiphenyl	0.200		mg/Kg wet	0.200		100	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.197		mg/Kg wet	0.200		98.7	30-150			
Surrogate: Tetrachloro-m-xylene	0.180		mg/Kg wet	0.200		90.2	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.187		mg/Kg wet	0.200		93.6	30-150			
<b>LCS Dup (B225583-BSD1)</b>										
Prepared: 03/13/19 Analyzed: 03/14/19										
Aroclor-1016	0.19	0.020	mg/Kg wet	0.200		95.2	40-140	2.84	30	
Aroclor-1016 [2C]	0.19	0.020	mg/Kg wet	0.200		93.1	40-140	6.09	30	
Aroclor-1260	0.17	0.020	mg/Kg wet	0.200		85.6	40-140	2.65	30	
Aroclor-1260 [2C]	0.16	0.020	mg/Kg wet	0.200		81.6	40-140	1.11	30	
Surrogate: Decachlorobiphenyl	0.196		mg/Kg wet	0.200		97.8	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.199		mg/Kg wet	0.200		99.6	30-150			
Surrogate: Tetrachloro-m-xylene	0.178		mg/Kg wet	0.200		89.1	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.182		mg/Kg wet	0.200		91.0	30-150			

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QUALITY CONTROL

Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B225583 - SW-846 3540C

Matrix Spike (B225583-MS1)

Source: 19C0442-01

Prepared: 03/13/19 Analyzed: 03/15/19

Aroclor-1016	0.28	0.092	mg/Kg dry	0.229	ND	122	40-140			
Aroclor-1016 [2C]	0.26	0.092	mg/Kg dry	0.229	ND	112	40-140			
Aroclor-1260	0.24	0.092	mg/Kg dry	0.229	ND	105	40-140			
Aroclor-1260 [2C]	0.23	0.092	mg/Kg dry	0.229	ND	100	40-140			
Surrogate: Decachlorobiphenyl	0.197		mg/Kg dry	0.229		86.0	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.205		mg/Kg dry	0.229		89.6	30-150			
Surrogate: Tetrachloro-m-xylene	0.216		mg/Kg dry	0.229		94.5	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.217		mg/Kg dry	0.229		94.6	30-150			

Matrix Spike Dup (B225583-MSD1)

Source: 19C0442-01

Prepared: 03/13/19 Analyzed: 03/15/19

Aroclor-1016	0.27	0.090	mg/Kg dry	0.225	ND	120	40-140	3.43	50	
Aroclor-1016 [2C]	0.25	0.090	mg/Kg dry	0.225	ND	112	40-140	2.09	50	
Aroclor-1260	0.23	0.090	mg/Kg dry	0.225	ND	102	40-140	5.02	50	
Aroclor-1260 [2C]	0.22	0.090	mg/Kg dry	0.225	ND	98.7	40-140	3.70	50	
Surrogate: Decachlorobiphenyl	0.192		mg/Kg dry	0.225		85.7	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.202		mg/Kg dry	0.225		90.1	30-150			
Surrogate: Tetrachloro-m-xylene	0.215		mg/Kg dry	0.225		95.8	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.217		mg/Kg dry	0.225		96.8	30-150			

Batch B225713 - SW-846 3540C

Blank (B225713-BLK1)

Prepared: 03/14/19 Analyzed: 03/18/19

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	0.213		mg/Kg wet	0.200		106	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.239		mg/Kg wet	0.200		120	30-150			
Surrogate: Tetrachloro-m-xylene	0.192		mg/Kg wet	0.200		95.9	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.194		mg/Kg wet	0.200		97.2	30-150			

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**QUALITY CONTROL**

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B225713 - SW-846 3540C</b>										
<b>LCS (B225713-BS1)</b>										
Prepared: 03/14/19 Analyzed: 03/18/19										
Aroclor-1016	0.19	0.020	mg/Kg wet	0.200		94.7	40-140			
Aroclor-1016 [2C]	0.18	0.020	mg/Kg wet	0.200		91.3	40-140			
Aroclor-1260	0.19	0.020	mg/Kg wet	0.200		93.9	40-140			
Aroclor-1260 [2C]	0.18	0.020	mg/Kg wet	0.200		91.3	40-140			
Surrogate: Decachlorobiphenyl	0.225		mg/Kg wet	0.200		112	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.248		mg/Kg wet	0.200		124	30-150			
Surrogate: Tetrachloro-m-xylene	0.207		mg/Kg wet	0.200		104	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.209		mg/Kg wet	0.200		104	30-150			
<b>LCS Dup (B225713-BS1)</b>										
Prepared: 03/14/19 Analyzed: 03/18/19										
Aroclor-1016	0.18	0.020	mg/Kg wet	0.200		89.5	40-140	5.58	30	
Aroclor-1016 [2C]	0.17	0.020	mg/Kg wet	0.200		86.1	40-140	5.90	30	
Aroclor-1260	0.18	0.020	mg/Kg wet	0.200		87.6	40-140	6.88	30	
Aroclor-1260 [2C]	0.17	0.020	mg/Kg wet	0.200		84.7	40-140	7.50	30	
Surrogate: Decachlorobiphenyl	0.205		mg/Kg wet	0.200		102	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.225		mg/Kg wet	0.200		112	30-150			
Surrogate: Tetrachloro-m-xylene	0.192		mg/Kg wet	0.200		95.9	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.193		mg/Kg wet	0.200		96.3	30-150			
<b>Matrix Spike (B225713-MS1)</b>										
<b>Source: 19C0442-21</b>										
Prepared: 03/14/19 Analyzed: 03/18/19										
Aroclor-1016	0.29	0.092	mg/Kg dry	0.231	ND	128	40-140			
Aroclor-1016 [2C]	0.29	0.092	mg/Kg dry	0.231	ND	126	40-140			
Aroclor-1260	0.24	0.092	mg/Kg dry	0.231	ND	104	40-140			
Aroclor-1260 [2C]	0.20	0.092	mg/Kg dry	0.231	ND	85.7	40-140			
Surrogate: Decachlorobiphenyl	0.217		mg/Kg dry	0.231		94.1	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.214		mg/Kg dry	0.231		92.8	30-150			
Surrogate: Tetrachloro-m-xylene	0.247		mg/Kg dry	0.231		107	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.232		mg/Kg dry	0.231		100	30-150			
<b>Matrix Spike Dup (B225713-MS1)</b>										
<b>Source: 19C0442-21</b>										
Prepared: 03/14/19 Analyzed: 03/18/19										
Aroclor-1016	0.22	0.086	mg/Kg dry	0.216	ND	103	40-140	27.8	50	
Aroclor-1016 [2C]	0.24	0.086	mg/Kg dry	0.216	ND	109	40-140	21.2	50	
Aroclor-1260	0.20	0.086	mg/Kg dry	0.216	ND	94.8	40-140	16.3	50	
Aroclor-1260 [2C]	0.17	0.086	mg/Kg dry	0.216	ND	78.1	40-140	15.9	50	
Surrogate: Decachlorobiphenyl	0.181		mg/Kg dry	0.216		83.6	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.173		mg/Kg dry	0.216		79.9	30-150			
Surrogate: Tetrachloro-m-xylene	0.206		mg/Kg dry	0.216		95.2	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.196		mg/Kg dry	0.216		90.8	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
<b>Batch B225790 - SW-846 3546</b>										
<b>Blank (B225790-BLK1)</b>										
Prepared: 03/14/19 Analyzed: 03/16/19										
TPH (C9-C36)	ND	8.3	mg/Kg wet							
Surrogate: 2-Fluorobiphenyl	2.68		mg/Kg wet	3.33		80.4	40-140			
<b>LCS (B225790-BS1)</b>										
Prepared: 03/14/19 Analyzed: 03/16/19										
TPH (C9-C36)	26.6	8.3	mg/Kg wet	33.3		79.9	40-140			
Surrogate: 2-Fluorobiphenyl	2.80		mg/Kg wet	3.33		83.9	40-140			
<b>LCS Dup (B225790-BSD1)</b>										
Prepared: 03/14/19 Analyzed: 03/16/19										
TPH (C9-C36)	26.9	8.3	mg/Kg wet	33.3		80.8	40-140	1.13	30	
Surrogate: 2-Fluorobiphenyl	2.76		mg/Kg wet	3.33		82.8	40-140			
<b>Matrix Spike (B225790-MS1)</b>										
Source: 19C0442-20 Prepared: 03/14/19 Analyzed: 03/16/19										
TPH (C9-C36)	377	200	mg/Kg dry	39.3	387	-26.9 *	40-140			MS-22
Surrogate: 2-Fluorobiphenyl	0.00		mg/Kg dry	3.93		*	40-140			S-01
<b>Matrix Spike Dup (B225790-MSD1)</b>										
Source: 19C0442-20 Prepared: 03/14/19 Analyzed: 03/16/19										
TPH (C9-C36)	423	200	mg/Kg dry	39.5	387	89.5	40-140	11.5	30	
Surrogate: 2-Fluorobiphenyl	0.00		mg/Kg dry	3.95		*	40-140			S-01
<b>Batch B225791 - SW-846 3546</b>										
<b>Blank (B225791-BLK1)</b>										
Prepared: 03/14/19 Analyzed: 03/15/19										
TPH (C9-C36)	ND	8.3	mg/Kg wet							
Surrogate: 2-Fluorobiphenyl	2.44		mg/Kg wet	3.33		73.2	40-140			
<b>LCS (B225791-BS1)</b>										
Prepared: 03/14/19 Analyzed: 03/15/19										
TPH (C9-C36)	27.2	8.3	mg/Kg wet	33.3		81.5	40-140			
Surrogate: 2-Fluorobiphenyl	2.56		mg/Kg wet	3.33		76.9	40-140			
<b>LCS Dup (B225791-BSD1)</b>										
Prepared: 03/14/19 Analyzed: 03/15/19										
TPH (C9-C36)	26.5	8.3	mg/Kg wet	33.3		79.4	40-140	2.67	30	
Surrogate: 2-Fluorobiphenyl	2.47		mg/Kg wet	3.33		74.0	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
<b>Batch B225633 - SW-846 7471</b>										
<b>Blank (B225633-BLK1)</b>				Prepared: 03/13/19 Analyzed: 03/14/19						
Mercury	ND	0.025	mg/Kg wet							
<b>LCS (B225633-BS1)</b>				Prepared: 03/13/19 Analyzed: 03/14/19						
Mercury	3.79	0.39	mg/Kg wet	3.71		102	65-135			
<b>LCS Dup (B225633-BSD1)</b>				Prepared: 03/13/19 Analyzed: 03/14/19						
Mercury	4.37	0.36	mg/Kg wet	3.71		118	65-135	14.4	30	
<b>Duplicate (B225633-DUP1)</b>				<b>Source: 19C0442-01</b>		Prepared: 03/13/19 Analyzed: 03/14/19				
Mercury	0.0738	0.028	mg/Kg dry		0.0786			6.31	35	
<b>Matrix Spike (B225633-MS1)</b>				<b>Source: 19C0442-01</b>		Prepared: 03/13/19 Analyzed: 03/14/19				
Mercury	0.426	0.028	mg/Kg dry	0.379	0.0786	91.8	75-125			
<b>Batch B225636 - SW-846 7471</b>										
<b>Blank (B225636-BLK1)</b>				Prepared: 03/13/19 Analyzed: 03/14/19						
Mercury	ND	0.025	mg/Kg wet							
<b>LCS (B225636-BS1)</b>				Prepared: 03/13/19 Analyzed: 03/14/19						
Mercury	3.55	0.38	mg/Kg wet	3.71		95.8	65-135			
<b>LCS Dup (B225636-BSD1)</b>				Prepared: 03/13/19 Analyzed: 03/14/19						
Mercury	3.45	0.38	mg/Kg wet	3.71		93.0	65-135	2.93	30	
<b>Duplicate (B225636-DUP1)</b>				<b>Source: 19C0442-24</b>		Prepared: 03/13/19 Analyzed: 03/14/19				
Mercury	0.0578	0.028	mg/Kg dry		0.0439			27.2	35	
<b>Matrix Spike (B225636-MS1)</b>				<b>Source: 19C0442-24</b>		Prepared: 03/13/19 Analyzed: 03/14/19				
Mercury	0.421	0.028	mg/Kg dry	0.378	0.0439	99.7	75-125			
<b>Batch B225671 - SW-846 3050B</b>										
<b>Blank (B225671-BLK1)</b>				Prepared: 03/13/19 Analyzed: 03/14/19						
Antimony	ND	1.7	mg/Kg wet							
Arsenic	ND	1.7	mg/Kg wet							
Barium	ND	1.7	mg/Kg wet							
Beryllium	ND	0.17	mg/Kg wet							
Cadmium	ND	0.17	mg/Kg wet							
Chromium	ND	0.33	mg/Kg wet							
Lead	ND	0.50	mg/Kg wet							
Nickel	ND	0.33	mg/Kg wet							
Selenium	ND	3.3	mg/Kg wet							
Silver	ND	0.33	mg/Kg wet							
Thallium	ND	1.7	mg/Kg wet							
Vanadium	ND	0.67	mg/Kg wet							
Zinc	ND	0.67	mg/Kg wet							

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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 B225671 - SW-846 3050B**

**LCS (B225671-BS1)**

Prepared: 03/13/19 Analyzed: 03/14/19

Antimony	76.1	5.1	mg/Kg wet	89.6		85.0	3.3-196.4			
Arsenic	191	5.1	mg/Kg wet	202		94.8	82.7-117.3			
Barium	271	5.1	mg/Kg wet	270		100	82.6-117.8			
Beryllium	97.4	0.51	mg/Kg wet	96.8		101	83.4-116.7			
Cadmium	135	0.51	mg/Kg wet	141		95.9	83-117			
Chromium	161	1.0	mg/Kg wet	167		96.2	81.4-118			
Lead	72.2	1.5	mg/Kg wet	73.8		97.8	82.9-117.1			
Nickel	90.2	1.0	mg/Kg wet	89.4		101	82.9-117.5			
Selenium	43.2	10	mg/Kg wet	49.9		86.7	79.2-120.6			
Silver	71.3	1.0	mg/Kg wet	71.1		100	79.7-120.1			
Thallium	63.4	5.1	mg/Kg wet	58.5		108	80.7-119.5			
Vanadium	52.7	2.0	mg/Kg wet	58.2		90.5	79-121			
Zinc	255	2.0	mg/Kg wet	264		96.4	80.7-119.3			

**LCS Dup (B225671-BSD1)**

Prepared: 03/13/19 Analyzed: 03/14/19

Antimony	74.3	5.0	mg/Kg wet	89.6		82.9	3.3-196.4	2.40	30	
Arsenic	191	5.0	mg/Kg wet	202		94.6	82.7-117.3	0.149	30	
Barium	282	5.0	mg/Kg wet	270		104	82.6-117.8	4.10	30	
Beryllium	97.1	0.50	mg/Kg wet	96.8		100	83.4-116.7	0.227	30	
Cadmium	138	0.50	mg/Kg wet	141		98.0	83-117	2.10	30	
Chromium	162	0.99	mg/Kg wet	167		97.2	81.4-118	1.07	30	
Lead	69.4	1.5	mg/Kg wet	73.8		94.1	82.9-117.1	3.88	30	
Nickel	91.1	0.99	mg/Kg wet	89.4		102	82.9-117.5	0.990	30	
Selenium	42.8	9.9	mg/Kg wet	49.9		85.7	79.2-120.6	1.13	30	
Silver	71.2	0.99	mg/Kg wet	71.1		100	79.7-120.1	0.143	30	
Thallium	64.1	5.0	mg/Kg wet	58.5		110	80.7-119.5	1.14	30	
Vanadium	52.9	2.0	mg/Kg wet	58.2		90.8	79-121	0.384	30	
Zinc	258	2.0	mg/Kg wet	264		97.9	80.7-119.3	1.48	30	

**Duplicate (B225671-DUP1)**

**Source: 19C0442-01**

Prepared: 03/13/19 Analyzed: 03/14/19

Antimony	1.91	1.9	mg/Kg dry		ND			NC	35	
Arsenic	6.11	1.9	mg/Kg dry		6.08			0.484	35	
Barium	35.8	1.9	mg/Kg dry		34.0			4.95	35	
Beryllium	0.330	0.19	mg/Kg dry		0.316			4.31	35	
Cadmium	0.402	0.19	mg/Kg dry		0.408			1.48	35	
Chromium	15.9	0.38	mg/Kg dry		14.9			6.47	35	
Lead	80.4	0.57	mg/Kg dry		70.9			12.6	35	
Nickel	11.1	0.38	mg/Kg dry		10.3			7.52	35	
Selenium	ND	3.8	mg/Kg dry		ND			NC	35	
Silver	ND	0.38	mg/Kg dry		ND			NC	35	
Thallium	ND	1.9	mg/Kg dry		ND			NC	35	
Vanadium	21.0	0.76	mg/Kg dry		20.4			2.92	35	
Zinc	53.0	0.76	mg/Kg dry		53.6			1.02	35	

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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 B225671 - SW-846 3050B**

**MRL Check (B225671-MRL1)**

Prepared: 03/13/19 Analyzed: 03/14/19

Lead	0.488	0.48	mg/Kg wet	0.484		101	80-120			
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**Matrix Spike (B225671-MS1)**

**Source: 19C0442-01**

Prepared: 03/13/19 Analyzed: 03/14/19

<b>Antimony</b>	8.08	1.8	mg/Kg dry	18.4	1.89	<b>33.6</b> *	75-125			M-07
Arsenic	23.6	1.8	mg/Kg dry	18.4	6.08	95.3	75-125			
Barium	51.8	1.8	mg/Kg dry	18.4	34.0	96.3	75-125			
Beryllium	18.0	0.18	mg/Kg dry	18.4	0.316	96.1	75-125			
Cadmium	17.8	0.18	mg/Kg dry	18.4	0.408	94.6	75-125			
Chromium	31.0	0.37	mg/Kg dry	18.4	14.9	87.4	75-125			
<b>Lead</b>	149	0.55	mg/Kg dry	18.4	70.9	<b>422</b> *	75-125			MS-14
Nickel	28.1	0.37	mg/Kg dry	18.4	10.3	96.5	75-125			
Selenium	14.4	3.7	mg/Kg dry	18.4	ND	78.4	75-125			
Silver	18.2	0.37	mg/Kg dry	18.4	ND	98.9	75-125			
Thallium	22.0	1.8	mg/Kg dry	18.4	ND	119	75-125			
Vanadium	38.1	0.74	mg/Kg dry	18.4	20.4	95.8	75-125			
Zinc	85.9	0.74	mg/Kg dry	36.8	53.6	87.8	75-125			

**Batch B225677 - SW-846 3050B**

**Blank (B225677-BLK1)**

Prepared: 03/13/19 Analyzed: 03/14/19

Antimony	ND	1.7	mg/Kg wet							
Arsenic	ND	1.7	mg/Kg wet							
Barium	ND	1.7	mg/Kg wet							
Beryllium	ND	0.17	mg/Kg wet							
Cadmium	ND	0.17	mg/Kg wet							
Chromium	ND	0.33	mg/Kg wet							
Lead	ND	0.50	mg/Kg wet							
Nickel	ND	0.33	mg/Kg wet							
Selenium	ND	3.3	mg/Kg wet							
Silver	ND	0.33	mg/Kg wet							
Thallium	ND	1.7	mg/Kg wet							
Vanadium	ND	0.67	mg/Kg wet							
Zinc	ND	0.67	mg/Kg wet							

**LCS (B225677-BS1)**

Prepared: 03/13/19 Analyzed: 03/14/19

Antimony	81.3	4.7	mg/Kg wet	89.6		90.7	3.3-196.4			
Arsenic	198	4.7	mg/Kg wet	202		98.1	82.7-117.3			
Barium	283	4.7	mg/Kg wet	270		105	82.6-117.8			
Beryllium	99.2	0.47	mg/Kg wet	96.8		103	83.4-116.7			
Cadmium	141	0.47	mg/Kg wet	141		100	83-117			
Chromium	168	0.93	mg/Kg wet	167		101	81.4-118			
Lead	73.0	1.4	mg/Kg wet	73.8		98.9	82.9-117.1			
Nickel	93.5	0.93	mg/Kg wet	89.4		105	82.9-117.5			
Selenium	43.6	9.3	mg/Kg wet	49.9		87.4	79.2-120.6			
Silver	73.8	0.93	mg/Kg wet	71.1		104	79.7-120.1			
Thallium	65.5	4.7	mg/Kg wet	58.5		112	80.7-119.5			
Vanadium	55.0	1.9	mg/Kg wet	58.2		94.5	79-121			
Zinc	263	1.9	mg/Kg wet	264		99.5	80.7-119.3			

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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 B225677 - SW-846 3050B**

**LCS Dup (B225677-BSD1)**

Prepared: 03/13/19 Analyzed: 03/14/19

Antimony	74.5	4.8	mg/Kg wet	89.6		83.1	3.3-196.4	8.72	30	
Arsenic	183	4.8	mg/Kg wet	202		90.8	82.7-117.3	7.74	30	
Barium	267	4.8	mg/Kg wet	270		98.9	82.6-117.8	5.72	30	
Beryllium	90.5	0.48	mg/Kg wet	96.8		93.5	83.4-116.7	9.15	30	
Cadmium	133	0.48	mg/Kg wet	141		94.4	83-117	5.98	30	
Chromium	156	0.96	mg/Kg wet	167		93.4	81.4-118	7.50	30	
Lead	68.4	1.4	mg/Kg wet	73.8		92.7	82.9-117.1	6.53	30	
Nickel	87.5	0.96	mg/Kg wet	89.4		97.8	82.9-117.5	6.65	30	
Selenium	41.1	9.6	mg/Kg wet	49.9		82.3	79.2-120.6	6.01	30	
Silver	68.0	0.96	mg/Kg wet	71.1		95.6	79.7-120.1	8.28	30	
Thallium	61.8	4.8	mg/Kg wet	58.5		106	80.7-119.5	5.85	30	
Vanadium	52.3	1.9	mg/Kg wet	58.2		89.9	79-121	4.96	30	
Zinc	250	1.9	mg/Kg wet	264		94.6	80.7-119.3	5.12	30	

**Duplicate (B225677-DUP1)**

**Source: 19C0442-27**

Prepared: 03/13/19 Analyzed: 03/14/19

Antimony	ND	1.8	mg/Kg dry		ND			NC	35	
Arsenic	7.46	1.8	mg/Kg dry		6.02			21.4	35	
Barium	35.2	1.8	mg/Kg dry		32.0			9.60	35	
Beryllium	0.316	0.18	mg/Kg dry		0.321			1.56	35	
Cadmium	0.483	0.18	mg/Kg dry		0.408			17.0	35	
Chromium	15.1	0.36	mg/Kg dry		14.7			2.95	35	
Lead	61.4	0.54	mg/Kg dry		59.7			2.83	35	
Nickel	12.4	0.36	mg/Kg dry		11.8			5.05	35	
Selenium	ND	3.6	mg/Kg dry		ND			NC	35	
Silver	ND	0.36	mg/Kg dry		ND			NC	35	
Thallium	ND	1.8	mg/Kg dry		ND			NC	35	
Vanadium	23.1	0.72	mg/Kg dry		20.8			10.6	35	
Zinc	51.4	0.72	mg/Kg dry		50.7			1.44	35	

**MRL Check (B225677-MRL1)**

Prepared: 03/13/19 Analyzed: 03/14/19

<b>Lead</b>	0.645	0.49	mg/Kg wet	0.491		<b>131</b>	* 80-120			M-10
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**Matrix Spike (B225677-MS1)**

**Source: 19C0442-27**

Prepared: 03/13/19 Analyzed: 03/14/19

<b>Antimony</b>	7.84	1.8	mg/Kg dry	18.5	1.77	<b>32.9</b>	* 75-125			MS-07
Arsenic	22.8	1.8	mg/Kg dry	18.5	6.02	91.0	75-125			
Barium	47.6	1.8	mg/Kg dry	18.5	32.0	84.6	75-125			
Beryllium	17.5	0.18	mg/Kg dry	18.5	0.321	93.2	75-125			
Cadmium	17.8	0.18	mg/Kg dry	18.5	0.408	94.0	75-125			
Chromium	31.9	0.37	mg/Kg dry	18.5	14.7	93.2	75-125			
Lead	78.0	0.55	mg/Kg dry	18.5	59.7	99.0	75-125			
Nickel	28.2	0.37	mg/Kg dry	18.5	11.8	88.5	75-125			
<b>Selenium</b>	13.6	3.7	mg/Kg dry	18.5	ND	<b>73.7</b>	* 75-125			MS-07
Silver	18.3	0.37	mg/Kg dry	18.5	ND	98.9	75-125			
Thallium	21.5	1.8	mg/Kg dry	18.5	ND	116	75-125			
Vanadium	37.9	0.74	mg/Kg dry	18.5	20.8	92.6	75-125			
Zinc	84.2	0.74	mg/Kg dry	37.0	50.7	90.7	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
<b>Batch B225597 - SM21-22 2510B</b>										
<b>Blank (B225597-BLK1)</b> Prepared & Analyzed: 03/13/19										
Specific conductance	ND	2.0	µmhos/cm							
<b>LCS (B225597-BS1)</b> Prepared & Analyzed: 03/13/19										
Specific conductance	190		µmhos/cm	192		100	90-110			
<b>Duplicate (B225597-DUP2)</b> Source: 19C0442-10 Prepared & Analyzed: 03/13/19										
Specific conductance	13	2.0	µmhos/cm		13			4.37	21	
<b>Batch B225616 - SW-846 9045C</b>										
<b>LCS (B225616-BS1)</b> Prepared & Analyzed: 03/13/19										
pH	6.01		pH Units	6.00		100	90-110			
<b>LCS (B225616-BS2)</b> Prepared & Analyzed: 03/13/19										
pH	6.00		pH Units	6.00		100	90-110			
<b>Duplicate (B225616-DUP1)</b> Source: 19C0442-02 Prepared & Analyzed: 03/13/19										
pH	8.4		pH Units		8.2			2.74	5	H-03
<b>Duplicate (B225616-DUP2)</b> Source: 19C0442-11 Prepared & Analyzed: 03/13/19										
pH	7.2		pH Units		7.1			1.09	5	H-03
<b>Batch B225617 - SW-846 9045C</b>										
<b>LCS (B225617-BS1)</b> Prepared & Analyzed: 03/13/19										
pH	5.96		pH Units	6.00		99.3	90-110			
<b>Duplicate (B225617-DUP1)</b> Source: 19C0442-22 Prepared & Analyzed: 03/13/19										
pH	7.9		pH Units		7.8			1.21	5	H-03
<b>Batch B225626 - SW-846 9014</b>										
<b>Blank (B225626-BLK1)</b> Prepared: 03/13/19 Analyzed: 03/14/19										
Reactive Cyanide	ND	0.40	mg/Kg							
<b>LCS (B225626-BS1)</b> Prepared: 03/13/19 Analyzed: 03/14/19										
Reactive Cyanide	9.5	0.40	mg/Kg	10.0		95.4	83.6-111			
<b>Batch B225627 - SW-846 9030A</b>										
<b>Blank (B225627-BLK1)</b> Prepared: 03/13/19 Analyzed: 03/14/19										
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
<b>Batch B225627 - SW-846 9030A</b>										
<b>LCS (B225627-BS1)</b>				Prepared: 03/13/19 Analyzed: 03/14/19						
Reactive Sulfide	14	2.0	mg/Kg	14.8		94.6	54.9-121			
<b>Batch B225720 - SM21-22 2510B Modified</b>										
<b>Blank (B225720-BLK1)</b>				Prepared & Analyzed: 03/14/19						
Specific conductance	ND	2.0	µmhos/cm							
<b>LCS (B225720-BS1)</b>				Prepared & Analyzed: 03/14/19						
Specific conductance	200		µmhos/cm	192		102	90-110			
<b>Duplicate (B225720-DUP1)</b>				<b>Source: 19C0442-20</b>			Prepared & Analyzed: 03/14/19			
Specific conductance	6.8	2.0	µmhos/cm			7.2		4.85	21	
<b>Batch B225772 - SW-846 9014</b>										
<b>Blank (B225772-BLK1)</b>				Prepared: 03/14/19 Analyzed: 03/15/19						
Reactive Cyanide	ND	0.40	mg/Kg							
<b>LCS (B225772-BS1)</b>				Prepared: 03/14/19 Analyzed: 03/15/19						
Reactive Cyanide	9.5	0.40	mg/Kg	10.0		95.4	83.6-111			
<b>Batch B225773 - SW-846 9030A</b>										
<b>Blank (B225773-BLK1)</b>				Prepared: 03/14/19 Analyzed: 03/15/19						
Reactive Sulfide	ND	2.0	mg/Kg							
<b>LCS (B225773-BS1)</b>				Prepared: 03/14/19 Analyzed: 03/15/19						
Reactive Sulfide	12	2.0	mg/Kg	14.8		81.1	54.9-121			
<b>Batch B225873 - SW-846 9014</b>										
<b>Blank (B225873-BLK1)</b>				Prepared: 03/15/19 Analyzed: 03/16/19						
Reactive Cyanide	ND	0.40	mg/Kg							
<b>LCS (B225873-BS1)</b>				Prepared: 03/15/19 Analyzed: 03/16/19						
Reactive Cyanide	9.5	0.40	mg/Kg	10.0		95.4	83.6-111			
<b>Batch B225875 - SW-846 9030A</b>										
<b>Blank (B225875-BLK1)</b>				Prepared: 03/15/19 Analyzed: 03/16/19						
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
<b>Batch B225875 - SW-846 9030A</b>										
<b>LCS (B225875-BS1)</b>					Prepared: 03/15/19 Analyzed: 03/16/19					
Reactive Sulfide	12	2.0	mg/Kg	14.8		78.4	54.9-121			
<b>Batch B225948 - % Solids</b>										
<b>Duplicate (B225948-DUP2)</b>					Source: 19C0442-25 Prepared & Analyzed: 03/18/19					
% Solids	88.7		% Wt		88.1			0.686	20	
<b>Duplicate (B225948-DUP3)</b>					Source: 19C0442-27 Prepared & Analyzed: 03/18/19					
% Solids	89.7		% Wt		89.6			0.107	20	

**IDENTIFICATION SUMMARY  
FOR SINGLE COMPONENT ANALYTES**

LCS

*SW-846 8082A*

Lab Sample ID:           B225583-BS1                                Date(s) Analyzed:           03/14/2019                     03/14/2019          

Instrument ID (1):           ECD3                                                Instrument ID (2):           ECD3          

GC Column (1):                                      ID:                                      (mm)                      GC Column (2):                                      ID:                                      (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.20	
	2	0.000	-0.030	0.030	0.20	0.0
Aroclor-1260	1	0.000	-0.030	0.030	0.18	
	2	0.000	-0.030	0.030	0.16	11.8

**IDENTIFICATION SUMMARY  
FOR SINGLE COMPONENT ANALYTES**

**LCS Dup**

*SW-846 8082A*

Lab Sample ID:                   B225583-BSD1                                        Date(s) Analyzed:           03/14/2019                     03/14/2019          

Instrument ID (1):                   ECD3                                        Instrument ID (2):                   ECD3                  

GC Column (1):                      ID:                      (mm)                      GC Column (2):                      ID:                      (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.19	
	2	0.000	-0.030	0.030	0.19	0.0
Aroclor-1260	1	0.000	-0.030	0.030	0.17	
	2	0.000	-0.030	0.030	0.16	6.1

**IDENTIFICATION SUMMARY  
FOR SINGLE COMPONENT ANALYTES**

**Matrix Spike**

*SW-846 8082A*

Lab Sample ID:                   B225583-MS1                                        Date(s) Analyzed:           03/15/2019                     03/15/2019          

Instrument ID (1):                   ECD3                                        Instrument ID (2):                   ECD3                  

GC Column (1):                      ID:                      (mm)                      GC Column (2):                      ID:                      (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.28	
	2	0.000	-0.030	0.030	0.26	7.4
Aroclor-1260	1	0.000	-0.030	0.030	0.24	
	2	0.000	-0.030	0.030	0.23	4.3

**IDENTIFICATION SUMMARY  
FOR SINGLE COMPONENT ANALYTES**

**Matrix Spike Dup**

*SW-846 8082A*

Lab Sample ID:                   B225583-MSD1                                        Date(s) Analyzed:           03/15/2019                     03/15/2019          

Instrument ID (1):                   ECD3                                                        Instrument ID (2):                   ECD3                  

GC Column (1):                                      ID:                                      (mm)                      GC Column (2):                                      ID:                                      (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.27	
	2	0.000	-0.030	0.030	0.25	7.7
Aroclor-1260	1	0.000	-0.030	0.030	0.23	
	2	0.000	-0.030	0.030	0.22	4.4

**IDENTIFICATION SUMMARY  
FOR SINGLE COMPONENT ANALYTES**  
*SW-846 8082A*

LCS
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Lab Sample ID:                     B225713-BS1                                          Date(s) Analyzed:           03/18/2019                     03/18/2019          

Instrument ID (1):                     ECD5                                          Instrument ID (2):                     ECD5                    

GC Column (1):                      ID:                      (mm)                      GC Column (2):                      ID:                      (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.19	
	2	0.000	-0.030	0.030	0.18	5.4
Aroclor-1260	1	0.000	-0.030	0.030	0.19	
	2	0.000	-0.030	0.030	0.18	5.4



**IDENTIFICATION SUMMARY  
FOR SINGLE COMPONENT ANALYTES**  
*SW-846 8082A*

<b>LCS Dup</b>
----------------

Lab Sample ID:                   B225713-BSD1                                        Date(s) Analyzed:           03/18/2019                     03/18/2019          

Instrument ID (1):                   ECD5                                        Instrument ID (2):                   ECD5                  

GC Column (1):                      ID:                      (mm)                      GC Column (2):                      ID:                      (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.18	
	2	0.000	-0.030	0.030	0.17	5.7
Aroclor-1260	1	0.000	-0.030	0.030	0.18	
	2	0.000	-0.030	0.030	0.17	5.7

**IDENTIFICATION SUMMARY  
FOR SINGLE COMPONENT ANALYTES**

**Matrix Spike**

*SW-846 8082A*

Lab Sample ID:                   B225713-MS1                                        Date(s) Analyzed:           03/18/2019                     03/18/2019          

Instrument ID (1):                   ECD5                                        Instrument ID (2):                   ECD5                  

GC Column (1):                      ID:                      (mm)                      GC Column (2):                      ID:                      (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.29	
	2	0.000	-0.030	0.030	0.29	3.4
Aroclor-1260	1	0.000	-0.030	0.030	0.24	
	2	0.000	-0.030	0.030	0.20	18.2

**IDENTIFICATION SUMMARY  
FOR SINGLE COMPONENT ANALYTES**

**Matrix Spike Dup**

*SW-846 8082A*

Lab Sample ID:                   B225713-MSD1                                        Date(s) Analyzed:           03/18/2019                     03/18/2019          

Instrument ID (1):                   ECD5                                                        Instrument ID (2):                   ECD5                  

GC Column (1):                                      ID:                      (mm)                      GC Column (2):                                      ID:                      (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.22	
	2	0.000	-0.030	0.030	0.24	8.7
Aroclor-1260	1	0.000	-0.030	0.030	0.20	
	2	0.000	-0.030	0.030	0.17	21.1

**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.
H-03	Sample received after recommended holding time was exceeded.
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-07A	Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD outside of control limits. Reduced precision anticipated for any reported result for this compound.
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-07	Result is serial dilution as per MA CAM/ CT RCP regulation.
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-07	Matrix spike recovery is outside of control limits. Analysis is in control based on laboratory fortified blank recovery. Possibility of sample matrix effects that lead to low bias for reported result or non-homogeneous sample aliquot cannot be eliminated.
MS-09	Matrix spike recovery and/or matrix spike duplicate recovery outside of control limits. Possibility of sample matrix effects that lead to a low bias for reported result or non-homogeneous sample aliquots cannot be eliminated.
MS-14	Matrix spike recovery is outside of control limits. Data validation is not affected since sample result is "not detected" and recovery bias is on the high side for this compound.
MS-22	Either matrix spike or MS duplicate is outside of control limits, but the other is within limits. RPD between the two MS/MSD results is within method specified criteria.
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.
R-06	Matrix spike duplicate RPD is outside of control limits. Reduced precision is anticipated for reported result for this compound in this sample.
RL-06	Elevated reporting limit due to high concentration of non-target compounds. MA CAM reporting limit not met.
RL-08	Elevated reporting limit due to sample matrix interference. MA CAM reporting limit not met.
S-01	The surrogate recovery for this sample is not available due to sample dilution below the surrogate reporting limit required from high analyte concentration and/or matrix interferences.
V-05	Continuing calibration verification (CCV) did not meet method specifications and was biased on the low side for this compound.
V-06	Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side for this compound.
V-16	Response factor is less than method specified minimum acceptable value. Reduced precision and accuracy may be associated with reported result.
V-20	Continuing calibration verification (CCV) 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.

**CERTIFICATIONS**

**Certified Analyses included in this Report**

Analyte	Certifications
<b>SM21-22 2510B in Water</b>	
Specific conductance	CT,MA,NH,NY,RI,NC,ME,VA
<b>SW-846 1030 in Soil</b>	
Ignitability	NY,NH,CT,NC,ME,VA
<b>SW-846 6010D in Soil</b>	
Antimony	CT,NH,NY,ME,VA,NC
Arsenic	CT,NH,NY,ME,VA,NC
Barium	CT,NH,NY,ME,VA,NC
Beryllium	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
Nickel	CT,NH,NY,ME,VA,NC
Selenium	CT,NH,NY,ME,VA,NC
Silver	CT,NH,NY,ME,VA,NC
Thallium	CT,NH,NY,ME,VA,NC
Vanadium	CT,NH,NY,ME,VA,NC
Zinc	CT,NH,NY,ME,VA,NC
<b>SW-846 7471B in Soil</b>	
Mercury	CT,NH,NY,NC,ME,VA
<b>SW-846 8082A in Soil</b>	
Aroclor-1016	CT,NH,NY,ME,NC,VA
Aroclor-1016 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1221	CT,NH,NY,ME,NC,VA
Aroclor-1221 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1232	CT,NH,NY,ME,NC,VA
Aroclor-1232 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1242	CT,NH,NY,ME,NC,VA
Aroclor-1242 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1248	CT,NH,NY,ME,NC,VA
Aroclor-1248 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1254	CT,NH,NY,ME,NC,VA
Aroclor-1254 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1260	CT,NH,NY,ME,NC,VA
Aroclor-1260 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1262	NY,NC,VA
Aroclor-1262 [2C]	NY,NC,VA
Aroclor-1268	NY,NC,VA
Aroclor-1268 [2C]	NY,NC,VA
<b>SW-846 8260C in Soil</b>	
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

**CERTIFICATIONS**

**Certified Analyses included in this Report**

Analyte	Certifications
<i>SW-846 8260C in Soil</i>	
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
1,2-Dibromo-3-chloropropane (DBCP)	NY
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
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

**CERTIFICATIONS**

**Certified Analyses included in this Report**

Analyte	Certifications
<b>SW-846 8260C in Soil</b>	
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
<b>SW-846 8270D in Soil</b>	
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
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

**CERTIFICATIONS**

**Certified Analyses included in this Report**

Analyte	Certifications
<b>SW-846 8270D in Soil</b>	
2,6-Dinitrotoluene	CT,NY,NH
Di-n-octylphthalate	CT,NY,NH
1,2-Diphenylhydrazine/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
2,4,5-Trichlorophenol	CT,NY,NH
2,4,6-Trichlorophenol	CT,NY,NH
<b>SW-846 8270D in Water</b>	
Acenaphthene	CT,NY,NH
Acenaphthylene	CT,NY,NH
Acetophenone	NY
Aniline	CT,NY
Anthracene	CT,NY,NH
Benzo(a)anthracene	CT,NY,NH
Benzo(a)pyrene	CT,NY,NH
Benzo(b)fluoranthene	CT,NY,NH
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



**CERTIFICATIONS**

**Certified Analyses included in this Report**

Analyte	Certifications
<i>SW-846 8270D in Water</i>	
Dibenzofuran	CT,NY,NH
Di-n-butylphthalate	CT,NY,NH
1,2-Dichlorobenzene	CT,NY,NH
1,3-Dichlorobenzene	CT,NY,NH
1,4-Dichlorobenzene	CT,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/Azobenzene	NY
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
2,4,5-Trichlorophenol	CT,NY,NH
2,4,6-Trichlorophenol	CT,NY,NH

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

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

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2005	100033	03/1/2020
MA	Massachusetts DEP	M-MA100	06/30/2019
CT	Connecticut Department of Public Health	PH-0567	09/30/2019
NY	New York State Department of Health	10899 NELAP	04/1/2019
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2020
RI	Rhode Island Department of Health	LAO00112	12/30/2019
NC	North Carolina Div. of Water Quality	652	12/31/2019
NJ	New Jersey DEP	MA007 NELAP	06/30/2019
FL	Florida Department of Health	E871027 NELAP	06/30/2019
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2019
ME	State of Maine	2011028	06/9/2019
VA	Commonwealth of Virginia	460217	12/14/2019
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2019
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2019
NC-DW	North Carolina Department of Health	25703	07/31/2019

Contract # VENEX  
Address: 100 N Washington St, Ste 302 Boston MA  
Phone: 617-275-5407  
Project Name: Wayland  
Project Location: MA  
Project Number: 46047  
Project Manager: K. Sarson  
Con-Test Quote Name/Number:  
Invoice Recipient: K. Sarson  
Sampled By: K. Sarson

**Requested Turnaround Time**  
7-Day  10-Day   
Due Date: 5 DAY

**Rush-Approval Required**  
1-Day  3-Day   
2-Day  4-Day

**Data Delivery**  
Format: PDF  EXCEL   
Other: EOP

CLP Like Data Pkg Required:   
Email To: Ksarsen@venexeng.com  
Fax To #:

Requested Turnaround Time		ANALYSIS REQUESTED										
7-Day	10-Day	VDC	SVOC	TPH	MCP	PCB	Log/Corr/React					
<input type="checkbox"/>	<input type="checkbox"/>	3	1	1	1	1	1					
Due Date: <u>5 DAY</u>		M	A	A	A	A	A					
<b>Rush-Approval Required</b>												
1-Day	3-Day											
2-Day	4-Day											
<b>Data Delivery</b>												
Format: PDF	EXCEL											
Other: <u>EOP</u>												
CLP Like Data Pkg Required:												
Email To: <u>Ksarsen@venexeng.com</u>												
Fax To #:												

Con-Test Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	Composite	Grab	Matrix Code	Conc Code	VDC	SVOC	TPH	MCP	PCB	Log/Corr/React
1	TP-D7 (0-5)	3/11/19	0750	X		S		X	X	X	X	X	X
2	TP-D7 (5-10)		0755										
3	TP-D6 (0-5)		0820										
4	TP-D6 (5-10)		0825										
5	TP-C6 (0-5)		0850										
6	TP-C6 (5-10)		0855										
7	TP-B6 (0-5)		0915										
8	TP-B6 (5-10)		0920										
9	TP-B5 (0-5)		0945										
10	TP-B5 (5-10)		0950										

# of Containers

<sup>2</sup> Preservation Code

<sup>3</sup> Container Code

**Dissolved Metals Samples**

Field Filtered  
 Lab to Filter

**Orthophosphate Samples**

Field Filtered  
 Lab to Filter

<sup>1</sup> Matrix Codes:  
GW = Ground Water  
WW = Waste Water  
DW = Drinking Water  
A = Air  
S = Soil  
SL = Sludge  
SOL = Solid  
O = Other (please define)

<sup>2</sup> 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)

<sup>3</sup> Container Codes:  
A = Amber Glass  
G = Glass  
P = Plastic  
ST = Sterile  
V = Vial  
S = Summa Canister  
T = Tedlar Bag  
O = Other (please define)

Comments:  
PACKED BY CLIENT 3-12-19 (ST)

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: 03/12/19 0956

Received by: (signature) [Signature] Date/Time: 03/12/19 0956

Relinquished by: (signature) [Signature] Date/Time: 3/12/19 1845

Received by: (signature) [Signature] Date/Time: 3/12/19 1845

Relinquished by: (signature) \_\_\_\_\_ Date/Time: \_\_\_\_\_


Received by: (signature) \_\_\_\_\_ Date/Time: \_\_\_\_\_

**Detection Limit Requirements**  
MA  CT  Other

**Special Requirements**  
 MA MCP Required  
 MCP Certification Form Required  
 CT RCP Required  
 RCP Certification Form Required  
 MA State DW Required

PWSID # \_\_\_\_\_

**Project Entity**  
 Government  Municipality  MWRA  WRTA  
 Federal  21 J  School  
 City  Brownfield  MBTA



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NELAP and AIHA-LAP, LLC Accredited

**PCB ONLY**

Soxhlet  
 Non Soxhlet



19C0442

http://www.contestlabs.com

Doc # 381 Rev 1\_03242017

Phone: 413-525-2332
Fax: 413-525-6405
Email: info@contestlabs.com

CHAIN OF CUSTODY RECORD

39 Spruce Street
East Longmeadow, MA 01028

Requested Turnaround Time: 7-Day, 10-Day
Due Date: 5 DAY
Approval Required: 1-Day, 2-Day, 3-Day, 4-Day
Data Delivery: Format: PDF, EXCEL
Other: EDD
CLP Like Data Pkg Required
Email To: kcarson@vertexeng.com
Fax To #:

Requested Turnaround Time: 7-Day, 10-Day
Due Date: 5 DAY
Approval Required: 1-Day, 2-Day, 3-Day, 4-Day
Data Delivery: Format: PDF, EXCEL
Other: EDD
CLP Like Data Pkg Required
Email To: kcarson@vertexeng.com
Fax To #:

Table with columns for analysis requested: VOC 8260, SVOC 8270, TPH 8100, MCP-14 Metals, PCB 8082 w/ Soxhlet, Ign/Conc/React/S/C. Includes handwritten 'changes per client. JLH 3/13/19'.

# of Containers
Preservation Code
Container Code
Dissolved Metals Samples
Field Filtered
Lab to Filter
Orthophosphate Samples
Field Filtered
Lab to Filter

Main data table with columns: Con-Test Work Order#, Client Sample ID / Description, Beginning Date/Time, Ending Date/Time, Composite, Grab, Matrix Code, Conc Code. Rows 11-20.

Comments: PACKED BY CLIENT. IR 3-12-19
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

- 1 Matrix Codes: GW = Ground Water, WW = Waste Water, DW = Drinking Water, A = Air, S = Soil, SL = Sludge, SOL = Solid, O = Other (please define)
2 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)
3 Container Codes: A = Amber Glass, G = Glass, P = Plastic, ST = Sterile, V = Vial, S = Summa Canister, T = Tedlar Bag, O = Other (please define)

Relinquished by (signature), Date/Time: 03/12/19 0956
Received by (signature), Date/Time: 3/12/19 0956
Relinquished by (signature), Date/Time: 3/12/19 1849
Received by (signature), Date/Time: 3/12/19 1845
Project Entity: Government, Municipality, MWRA, WRTA, Federal, 21 J, School, City, Brownfield, MBTA

con-test ANALYTICAL LABORATORY logo and website information.

Other: Chromatogram, AIHA-LAP, LLC
PCB ONLY: Soxhlet, Non Soxhlet



19C0442  
 Phone: 413-525-2332  
 Fax: 413-525-6405  
 Email: info@contestlabs.com

http://www.contestlabs.com  
 CHAIN OF CUSTODY RECORD

Doc # 381 Rev 1\_03242017

39 Spruce Street  
 East Longmeadow, MA 01028

Company Address: **Verlex**  
 Address: **100N Washington St 302, Boston MA**  
 Phone: **617-275-5407**  
 Project Name: **Wayland**  
 Project Location: **MA**  
 Project Number: **46047**  
 Project Manager: **K. Sarson**  
 Con-Test Quote Name/Number:  
 Invoice Recipient: **K. Sarson**  
 Sampled By: **K. Sarson**

**Requested Turnaround Time**  
 7-Day  10-Day   
 Due Date: **5-DAY**

**Rush Approval Required**  
 1-Day  3-Day   
 2-Day  4-Day

**Data Delivery**  
 Format: PDF  EXCEL   
 Other: **COO**  
 CLP Like Data Pkg Required:   
 Email To: **ksarson@verlex-eng.com**  
 Fax To #:

Requested Turnaround Time	Requested Turnaround Time	Requested Turnaround Time	Requested Turnaround Time	Requested Turnaround Time	Requested Turnaround Time	Requested Turnaround Time	Requested Turnaround Time	Requested Turnaround Time	Requested Turnaround Time	Requested Turnaround Time	Requested Turnaround Time	Requested Turnaround Time	Requested Turnaround Time	Requested Turnaround Time	Requested Turnaround Time	Requested Turnaround Time	Requested Turnaround Time	Requested Turnaround Time
3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
M	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
V	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
VOC 8260	SVOC 8270	TPH 8100	MCP 14 Metals	PCBs 8082 w Soxhlet	Ign/Corr/React/gpc													

# of Containers  
 2 Preservation Code  
 3 Container Code

**Dissolved Metals Samples**  
 Field Filtered  
 Lab to Filter

**Ortho-phosphate Samples**  
 Field Filtered  
 Lab to Filter

Con-Test Work Order #	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	Composite	Grab	Matrix Code	Conc Code	Conc Code	Conc Code	Conc Code	Conc Code	Conc Code	Conc Code	Conc Code	Conc Code	Conc Code	Conc Code	Conc Code	
21	TP-A5 (0-5)	3/11/19	1325	Y		S													
22	TP-A5 (5-10)		1330																
23	TP-A4 (0-5)		1400																
24	TP-A4 (5-10)		1405																
25	TP-A3 (0-5)		1415																
26	TP-A3 (5-10)		1420																
27	TP-B3 (0-5)		1445																
28	TP-B3 (5-10)		1450																

**1 Matrix Codes:**  
 GW = Ground Water  
 WW = Waste Water  
 DW = Drinking Water  
 A = Air  
 S = Soil  
 SL = Sludge  
 SOL = Solid  
 O = Other (please define)

**2 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)

**3 Container Codes:**  
 A = Amber Glass  
 G = Glass  
 P = Plastic  
 ST = Sterile  
 V = Vial  
 S = Summa Canister  
 T = Tedlar Bag  
 O = Other (please define)

Comments: **PAKED BY CLT/JP 3-12-19**

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: **03/12/19 0956**

Received by: (signature) **[Signature]** Date/Time: **0956**

Relinquished by: (signature) **[Signature]** Date/Time: **3/12/19 1845**

Received by: (signature) **[Signature]** Date/Time: **3/12/19 1845**

Relinquished by: (signature) **[Signature]** Date/Time: **3/12/19**

Received by: (signature) **[Signature]** Date/Time: **3/12/19**

**Detection Limit Requirements**  
 MA

**Special Requirements**  
 MA MCP Required  
 MCP Certification Form Required  
 CT RCP Required  
 RCP Certification Form Required  
 MA State DW Required

**Project Entity**  
 Government  Municipality  MWRA  WRTA  
 Federal  21 J  School  
 City  Brownfield  MBTA

**Other**  
 Chromatogram  
 AIHA-LAP, LLC

**con-test**  
 ANALYTICAL LABORATORY  
 www.contestlabs.com

**NELAP and AIHA-LAP, LLC Accredited**

**PCB ONLY**  
 Soxhlet  
 Non Soxhlet

I Have Not Confirmed Sample Container Numbers With Lab Staff Before Relinquishing Over Samples \_\_\_\_\_



**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 Vertex

Received By LR Date 3/12/19 Time 1845

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 # 5 Actual Temp - 2.1, 5.5  
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? F  
Did COC include all Client T Analysis T Sampler Name F  
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? F Who was notified? \_\_\_\_\_  
Are there Short Holds? T Who was notified? Miranda

Is there enough Volume? T

Is there Headspace where applicable? NA 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? NA Acid \_\_\_\_\_ Base \_\_\_\_\_

Vials	#	Containers:	#	#	#
Unp-		1 Liter Amb.		1 Liter Plastic	16 oz Amb.
HCL-		500 mL Amb.		500 mL Plastic	8oz Amb/Clear
Meoh-	<u>28</u>	250 mL Amb.		250 mL Plastic	4oz Amb/Clear
Bisulfate-	<u>56</u>	Flashpoint		Col./Bacteria	2oz Amb/Clear
DI-		Other Glass		Other Plastic	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 #: 19C0442
Project Location: Wayland, MA	RTN:

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]  
19C0442-01 thru 19C0442-28

Matrices: Soil

**CAM Protocol (check all that below)**

8260 VOC CAM II A (X)	7470/7471 Hg CAM III B (X)	MassDEP VPH CAM IV A ( )	8082 PCB CAM V A (X)	9014 Total Cyanide/PAC CAM VI A ( )	6860 Perchlorate CAM VIII B ( )
8270 SVOC CAM II B (X)	7010 Metals CAM III C ( )	MassDEP VPH CAM IV C ( )	8081 Pesticides CAM V B ( )	7196 Hex Cr CAM VI B ( )	MassDEP APH CAM IX A ( )
6010 Metals CAM III A (X)	6020 Metals CAM III D ( )	MassDEP EPH CAM IV B ( )	8151 Herbicides CAM V C ( )	8330 Explosives CAM VIII A ( )	TO-15 VOC CAM IX B ( )

**Affirmative response to Questions A through F is required for "Presumptive Certainty" status**

<b>A</b>	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?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>B</b>	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>C</b>	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>D</b>	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?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>E a</b>	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).	<input type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>E b</b>	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	<input type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>F</b>	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)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>

**A response to questions G, H and I below is required for "Presumptive Certainty" status**

<b>G</b>	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <sup>1</sup>
----------	---	--

**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.**

<b>H</b>	Were all QC performance standards specified in the CAM protocol(s) achieved?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <sup>1</sup>
<b>I</b>	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>

<sup>1</sup>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: Lisa Worthington

Position: Project Manager

Printed Name: Lisa A. Worthington

Date: 03/19/19

March 20, 2019

Kristen Sarson  
Vertex Engineering - Boston  
100 North Washington St. Suite 302  
Boston, MA 02114

Project Location: Wayland, MA  
Client Job Number:  
Project Number: 46047  
Laboratory Work Order Number: 19C0480

Enclosed are results of analyses for samples received by the laboratory on March 12, 2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, reading "Jessica Hoffman", is displayed on a light blue rectangular background. The signature is written in a cursive, flowing style.

Jessica L. Hoffman  
Project Manager



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

Vertex Engineering - Boston  
 100 North Washington St. Suite 302  
 Boston, MA 02114  
 ATTN: Kristen Sarson

REPORT DATE: 3/20/2019

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 46047

**ANALYTICAL SUMMARY**

WORK ORDER NUMBER: 19C0480

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

PROJECT LOCATION: Wayland, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
TP-C3 (0-5)	19C0480-01	Soil		SM 2540G	
				SM21-22 2510B Modified	
				SW-846 1030	
				SW-846 6010D	
				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	
				TP-C3 (5-10)	
SM21-22 2510B Modified					
SW-846 1030					
SW-846 6010D					
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					
TP-D3 (0-5)	19C0480-03	Soil			SM 2540G
				SM21-22 2510B Modified	
				SW-846 1030	
				SW-846 6010D	
				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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Vertex Engineering - Boston  
 100 North Washington St. Suite 302  
 Boston, MA 02114  
 ATTN: Kristen Sarson

REPORT DATE: 3/20/2019

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 46047

**ANALYTICAL SUMMARY**

WORK ORDER NUMBER: 19C0480

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PROJECT LOCATION: Wayland, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
TP-D3 (5-10)	19C0480-04	Soil		SM 2540G	
				SM21-22 2510B	
				Modified	
				SW-846 1030	
				SW-846 6010D	
				SW-846 7471B	
				SW-846 8082A	
				SW-846 8100 Modified	
				SW-846 8260C	
				SW-846 8270D	
				SW-846 9014	
				SW-846 9030A	
				TP-D3 (10-15)	
SM21-22 2510B					
Modified					
SW-846 1030					
SW-846 6010D					
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					
TP-E3 (0-5)	19C0480-06	Soil		SM 2540G	
				SM21-22 2510B	
				Modified	
				SW-846 1030	
				SW-846 6010D	
				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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**ANALYTICAL SUMMARY**

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PROJECT LOCATION: Wayland, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
TP-E3 (5-10)	19C0480-07	Soil		SM 2540G	
				SM21-22 2510B	
				Modified	
				SW-846 1030	
				SW-846 6010D	
				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	
TP-F3 (0-5)	19C0480-08	Soil		SM 2540G	
				SM21-22 2510B	
				Modified	
				SW-846 1030	
				SW-846 6010D	
				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	
TP-F3 (5-10)	19C0480-09	Soil		SM 2540G	
				SM21-22 2510B	
				Modified	
				SW-846 1030	
				SW-846 6010D	
				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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 100 North Washington St. Suite 302  
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**ANALYTICAL SUMMARY**

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PROJECT LOCATION: Wayland, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
TP-E2 (0-5)	19C0480-10	Soil		SM 2540G	
				SM21-22 2510B	
				Modified	
				SW-846 1030	
				SW-846 6010D	
				SW-846 7471B	
				SW-846 8082A	
				SW-846 8100 Modified	
				SW-846 8260C	
				SW-846 8270D	
				SW-846 9014	
				SW-846 9030A	
				TP-E2 (5-10)	
SM21-22 2510B					
Modified					
SW-846 1030					
SW-846 6010D					
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					
TP-D2 (0-5)	19C0480-12	Soil		SM 2540G	
				SM21-22 2510B	
				Modified	
				SW-846 1030	
				SW-846 6010D	
				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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PROJECT LOCATION: Wayland, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
TP-D2 (5-10)	19C0480-13	Soil		SM 2540G	
				SM21-22 2510B	
				Modified	
				SW-846 1030	
				SW-846 6010D	
				SW-846 7471B	
				SW-846 8082A	
				SW-846 8100 Modified	
				SW-846 8260C	
				SW-846 8270D	
				SW-846 9014	
				SW-846 9030A	
				TP-C2 (0-5)	
SM21-22 2510B					
Modified					
SW-846 1030					
SW-846 6010D					
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					
TP-C2 (5-10)	19C0480-15	Soil		SM 2540G	
				SM21-22 2510B	
				Modified	
				SW-846 1030	
				SW-846 6010D	
				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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REPORT DATE: 3/20/2019

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 46047

**ANALYTICAL SUMMARY**

WORK ORDER NUMBER: 19C0480

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PROJECT LOCATION: Wayland, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
TP-D1 (0-5)	19C0480-16	Soil		SM 2540G	
				SM21-22 2510B	
				Modified	
				SW-846 1030	
				SW-846 6010D	
				SW-846 7471B	
				SW-846 8082A	
				SW-846 8100 Modified	
				SW-846 8260C	
				SW-846 8270D	
				SW-846 9014	
				SW-846 9030A	
				TP-D1 (5-10)	
SM21-22 2510B					
Modified					
SW-846 1030					
SW-846 6010D					
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					
TP-C1 (0-5)	19C0480-18	Soil		SM 2540G	
				SM21-22 2510B	
				Modified	
				SW-846 1030	
				SW-846 6010D	
				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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Vertex Engineering - Boston  
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 ATTN: Kristen Sarson

REPORT DATE: 3/20/2019

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**ANALYTICAL SUMMARY**

WORK ORDER NUMBER: 19C0480

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

PROJECT LOCATION: Wayland, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
TP-C1 (5-10)	19C0480-19	Soil		SM 2540G	
				SM21-22 2510B	
				Modified	
				SW-846 1030	
				SW-846 6010D	
				SW-846 7471B	
				SW-846 8082A	
				SW-846 8100 Modified	
				SW-846 8260C	
				SW-846 8270D	
				SW-846 9014	
				SW-846 9030A	
				TP-B1 (0-5)	
SM21-22 2510B					
Modified					
SW-846 1030					
SW-846 6010D					
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					
TP-B1 (5-10)	19C0480-21	Soil		SM 2540G	
				SM21-22 2510B	
				Modified	
				SW-846 1030	
				SW-846 6010D	
				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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Vertex Engineering - Boston  
 100 North Washington St. Suite 302  
 Boston, MA 02114  
 ATTN: Kristen Sarson

REPORT DATE: 3/20/2019

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 46047

**ANALYTICAL SUMMARY**

WORK ORDER NUMBER: 19C0480

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

PROJECT LOCATION: Wayland, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
TP-B2 (0-5)	19C0480-22	Soil		SM 2540G	
				SM21-22 2510B	
				Modified	
				SW-846 1030	
				SW-846 6010D	
				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	
TP-B2 (5-10)	19C0480-23	Soil		SM 2540G	
				SM21-22 2510B	
				Modified	
				SW-846 1030	
				SW-846 6010D	
				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	
TP-A1 (0-5)	19C0480-24	Soil		SM 2540G	
				SM21-22 2510B	
				Modified	
				SW-846 1030	
				SW-846 6010D	
				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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PROJECT NUMBER: 46047

**ANALYTICAL SUMMARY**

WORK ORDER NUMBER: 19C0480

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

PROJECT LOCATION: Wayland, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
TP-A2 (5-10)	19C0480-25	Soil		SM 2540G	
				SM21-22 2510B	
				Modified	
				SW-846 1030	
				SW-846 6010D	
				SW-846 7471B	
				SW-846 8082A	
				SW-846 8100 Modified	
				SW-846 8260C	
				SW-846 8270D	
				SW-846 9014	
				SW-846 9030A	
				TP-A1 (5-10)	
SM21-22 2510B					
Modified					
SW-846 1030					
SW-846 6010D					
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					
TP-A2 (0-5)	19C0480-27	Soil		SM 2540G	
				SM21-22 2510B	
				Modified	
				SW-846 1030	
				SW-846 6010D	
				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	

**CASE NARRATIVE SUMMARY**

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

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SW-846 6010D

**Qualifications:****MS-07**

Matrix spike recovery is outside of control limits. Analysis is in control based on laboratory fortified blank recovery. Possibility of sample matrix effects that lead to low bias for reported result or non-homogeneous sample aliquot cannot be eliminated.

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

19C0480-06[TP-E3 (0-5)], 19C0480-21[TP-B1 (5-10)], B225680-MS1, B225880-MS1

**MS-14**

Matrix spike recovery is outside of control limits. Data validation is not affected since sample result is "not detected" and recovery bias is on the high side for this compound.

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

19C0480-06[TP-E3 (0-5)], 19C0480-07[TP-E3 (5-10)], B225680-MS1

SW-846 8082A

**Qualifications:****O-32**

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

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

19C0480-01[TP-C3 (0-5)], 19C0480-02[TP-C3 (5-10)], 19C0480-03[TP-D3 (0-5)], 19C0480-04[TP-D3 (5-10)], 19C0480-05[TP-D3 (10-15)], 19C0480-06[TP-E3 (0-5)], 19C0480-07[TP-E3 (5-10)], 19C0480-08[TP-F3 (0-5)], 19C0480-10[TP-E2 (0-5)], 19C0480-11[TP-E2 (5-10)], 19C0480-12[TP-D2 (0-5)], 19C0480-13[TP-D2 (5-10)], 19C0480-14[TP-C2 (0-5)], 19C0480-15[TP-C2 (5-10)], 19C0480-16[TP-D1 (0-5)], 19C0480-17[TP-D1 (5-10)], 19C0480-18[TP-C1 (0-5)], 19C0480-19[TP-C1 (5-10)], 19C0480-20[TP-B1 (0-5)], 19C0480-21[TP-B1 (5-10)], 19C0480-22[TP-B2 (0-5)], 19C0480-23[TP-B2 (5-10)], 19C0480-24[TP-A1 (0-5)], 19C0480-25[TP-A2 (5-10)], 19C0480-26[TP-A1 (5-10)], 19C0480-27[TP-A2 (0-5)]

SW-846 8100 Modified

**Qualifications:****MS-19**

Sample to spike ratio is greater than or equal to 4:1. Spiked amount is not representative of the native amount in the sample. Appropriate or meaningful recoveries cannot be calculated.

**Analyte & Samples(s) Qualified:****TPH (C9-C36)**

B225812-MS1, B225812-MSD1

**S-01**

The surrogate recovery for this sample is not available due to sample dilution below the surrogate reporting limit required from high analyte concentration and/or matrix interferences.

**Analyte & Samples(s) Qualified:****2-Fluorobiphenyl**

19C0480-01[TP-C3 (0-5)], 19C0480-02[TP-C3 (5-10)], 19C0480-04[TP-D3 (5-10)], 19C0480-05[TP-D3 (10-15)], 19C0480-07[TP-E3 (5-10)], 19C0480-08[TP-F3 (0-5)], 19C0480-10[TP-E2 (0-5)], 19C0480-13[TP-D2 (5-10)], 19C0480-14[TP-C2 (0-5)], 19C0480-15[TP-C2 (5-10)], 19C0480-16[TP-D1 (0-5)], 19C0480-17[TP-D1 (5-10)], 19C0480-19[TP-C1 (5-10)], B225812-MS1, B225812-MSD1

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:****Vinyl Chloride**

19C0480-02[TP-C3 (5-10)], 19C0480-03[TP-D3 (0-5)], 19C0480-04[TP-D3 (5-10)], 19C0480-05[TP-D3 (10-15)], 19C0480-06[TP-E3 (0-5)], 19C0480-07[TP-E3 (5-10)], 19C0480-08[TP-F3 (0-5)], 19C0480-09[TP-F3 (5-10)], 19C0480-10[TP-E2 (0-5)], 19C0480-11[TP-E2 (5-10)], 19C0480-12[TP-D2 (0-5)], 19C0480-13[TP-D2 (5-10)], 19C0480-14[TP-C2 (0-5)], 19C0480-15[TP-C2 (5-10)], 19C0480-16[TP-D1 (0-5)], 19C0480-17[TP-D1 (5-10)], 19C0480-18[TP-C1 (0-5)], 19C0480-19[TP-C1 (5-10)], 19C0480-20[TP-B1 (0-5)], B225708-BLK1, B225708-BS1, B225708-BSD1, S033517-CCV1

**V-05**  
Continuing calibration verification (CCV) did not meet method specifications and was biased on the low side for this compound.

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

**1,2-Dibromo-3-chloropropane (DBP)**

19C0480-01[TP-C3 (0-5)], 19C0480-21[TP-B1 (5-10)], 19C0480-22[TP-B2 (0-5)], 19C0480-23[TP-B2 (5-10)], B225666-BLK1, B225666-BS1, B225666-BSD1, B225764-BLK1, B225764-BS1, B225764-BSD1, S033475-CCV1, S033512-CCV1

**1,4-Dioxane**

19C0480-24[TP-A1 (0-5)], 19C0480-25[TP-A2 (5-10)], 19C0480-26[TP-A1 (5-10)], 19C0480-27[TP-A2 (0-5)], B225768-BLK1, B225768-BS1, B225768-BSD1, S033514-CCV1

**2,2-Dichloropropane**

19C0480-24[TP-A1 (0-5)], 19C0480-25[TP-A2 (5-10)], 19C0480-26[TP-A1 (5-10)], 19C0480-27[TP-A2 (0-5)], B225768-BLK1, B225768-BS1, B225768-BSD1, S033514-CCV1

**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**

19C0480-01[TP-C3 (0-5)], 19C0480-21[TP-B1 (5-10)], 19C0480-22[TP-B2 (0-5)], 19C0480-23[TP-B2 (5-10)], 19C0480-24[TP-A1 (0-5)], 19C0480-25[TP-A2 (5-10)], 19C0480-26[TP-A1 (5-10)], 19C0480-27[TP-A2 (0-5)], B225666-BLK1, B225666-BS1, B225666-BSD1, B225764-BLK1, B225764-BS1, B225764-BSD1, B225768-BLK1, B225768-BS1, B225768-BSD1, S033512-CCV1

**V-20**  
Continuing calibration verification (CCV) 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:**

**Bromoform**

B225708-BS1, B225708-BSD1, S033517-CCV1

**Bromomethane**

B225764-BS1, B225764-BSD1, S033512-CCV1

**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**

19C0480-01[TP-C3 (0-5)], 19C0480-02[TP-C3 (5-10)], 19C0480-03[TP-D3 (0-5)], 19C0480-04[TP-D3 (5-10)], 19C0480-05[TP-D3 (10-15)], 19C0480-06[TP-E3 (0-5)], 19C0480-07[TP-E3 (5-10)], 19C0480-08[TP-F3 (0-5)], 19C0480-09[TP-F3 (5-10)], 19C0480-10[TP-E2 (0-5)], 19C0480-11[TP-E2 (5-10)], 19C0480-12[TP-D2 (0-5)], 19C0480-13[TP-D2 (5-10)], 19C0480-14[TP-C2 (0-5)], 19C0480-15[TP-C2 (5-10)], 19C0480-16[TP-D1 (0-5)], 19C0480-17[TP-D1 (5-10)], 19C0480-18[TP-C1 (0-5)], 19C0480-19[TP-C1 (5-10)], 19C0480-20[TP-B1 (0-5)], 19C0480-21[TP-B1 (5-10)], 19C0480-22[TP-B2 (0-5)], 19C0480-23[TP-B2 (5-10)], 19C0480-24[TP-A1 (0-5)], 19C0480-25[TP-A2 (5-10)], 19C0480-26[TP-A1 (5-10)], 19C0480-27[TP-A2 (0-5)], B225666-BLK1, B225666-BS1, B225666-BSD1, B225708-BLK1, B225708-BS1, B225708-BSD1, B225764-BLK1, B225764-BS1, B225764-BSD1, B225768-BLK1, B225768-BS1, B225768-BSD1, S033475-CCV1, S033512-CCV1, S033514-CCV1, S033517-CCV1

**SW-846 8270D**

**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:**

**Aniline**

19C0480-01[TP-C3 (0-5)], 19C0480-02[TP-C3 (5-10)], 19C0480-03[TP-D3 (0-5)], 19C0480-04[TP-D3 (5-10)], 19C0480-05[TP-D3 (10-15)], 19C0480-06[TP-E3 (0-5)], 19C0480-07[TP-E3 (5-10)], 19C0480-08[TP-F3 (0-5)], 19C0480-09[TP-F3 (5-10)], 19C0480-10[TP-E2 (0-5)], 19C0480-11[TP-E2 (5-10)], 19C0480-12[TP-D2 (0-5)], 19C0480-13[TP-D2 (5-10)], 19C0480-14[TP-C2 (0-5)], 19C0480-15[TP-C2 (5-10)], 19C0480-16[TP-D1 (0-5)], 19C0480-17[TP-D1 (5-10)], 19C0480-18[TP-C1 (0-5)], 19C0480-19[TP-C1 (5-10)], 19C0480-20[TP-B1 (0-5)], B225813-BLK1, B225813-BS1, B225813-BSD1, B225813-MS1, B225813-MSD1

**MS-09**

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

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

19C0480-21[TP-B1 (5-10)], B225813-MS1, B225813-MSD1, B225814-MS1, B225814-MSD1

**4-Chloroaniline**

19C0480-21[TP-B1 (5-10)], B225814-MS1, B225814-MSD1

**Aniline**

19C0480-21[TP-B1 (5-10)], B225813-MS1, B225813-MSD1, B225814-MS1, B225814-MSD1

**Benzo(a)anthracene**

19C0480-21[TP-B1 (5-10)], B225814-MS1, B225814-MSD1

**Benzo(a)pyrene**

19C0480-21[TP-B1 (5-10)], B225814-MS1, B225814-MSD1

**Benzo(b)fluoranthene**

19C0480-21[TP-B1 (5-10)], B225814-MS1, B225814-MSD1

**Benzo(g,h,i)perylene**

19C0480-21[TP-B1 (5-10)], B225814-MS1, B225814-MSD1

**Benzo(k)fluoranthene**

19C0480-21[TP-B1 (5-10)], B225814-MS1, B225814-MSD1

**Chrysene**

19C0480-21[TP-B1 (5-10)], B225814-MS1, B225814-MSD1

**Fluoranthene**

19C0480-21[TP-B1 (5-10)], B225813-MS1, B225813-MSD1, B225814-MS1, B225814-MSD1

**Hexachloroethane**

19C0480-21[TP-B1 (5-10)], B225814-MS1, B225814-MSD1

**Indeno(1,2,3-cd)pyrene**

19C0480-21[TP-B1 (5-10)], B225814-MS1, B225814-MSD1

**Phenanthrene**

19C0480-21[TP-B1 (5-10)], B225813-MS1, B225813-MSD1, B225814-MS1, B225814-MSD1

**Pyrene**

19C0480-21[TP-B1 (5-10)], B225813-MS1, B225813-MSD1, B225814-MS1, B225814-MSD1

**MS-22**

Either matrix spike or MS duplicate is outside of control limits, but the other is within limits. RPD between the two MS/MSD results is within method specified criteria.

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

B225814-MS1

**RL-08**

Elevated reporting limit due to sample matrix interference. MA CAM reporting limit not met.

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

19C0480-03[TP-D3 (0-5)], 19C0480-04[TP-D3 (5-10)], 19C0480-05[TP-D3 (10-15)], 19C0480-06[TP-E3 (0-5)], 19C0480-07[TP-E3 (5-10)], 19C0480-08[TP-F3 (0-5)], 19C0480-09[TP-F3 (5-10)], 19C0480-10[TP-E2 (0-5)], 19C0480-11[TP-E2 (5-10)], 19C0480-12[TP-D2 (0-5)], 19C0480-13[TP-D2 (5-10)], 19C0480-14[TP-C2 (0-5)], 19C0480-15[TP-C2 (5-10)], 19C0480-16[TP-D1 (0-5)], 19C0480-17[TP-D1 (5-10)], 19C0480-18[TP-C1 (0-5)], 19C0480-19[TP-C1 (5-10)], 19C0480-20[TP-B1 (0-5)], 19C0480-21[TP-B1 (5-10)], 19C0480-23[TP-B2 (5-10)], 19C0480-24[TP-A1 (0-5)], 19C0480-25[TP-A2 (5-10)], 19C0480-27[TP-A2 (0-5)]



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**

B225813-BLK1, B225813-BS1, B225813-BSD1, B225814-BLK1, B225814-BS1, B225814-BSD1, S033628-CCV1, S033637-CCV1

**4-Chloroaniline**

19C0480-01[TP-C3 (0-5)], 19C0480-02[TP-C3 (5-10)], 19C0480-03[TP-D3 (0-5)], 19C0480-04[TP-D3 (5-10)], 19C0480-05[TP-D3 (10-15)], 19C0480-06[TP-E3 (0-5)], 19C0480-07[TP-E3 (5-10)], 19C0480-08[TP-F3 (0-5)], 19C0480-09[TP-F3 (5-10)], 19C0480-10[TP-E2 (0-5)], 19C0480-11[TP-E2 (5-10)], 19C0480-12[TP-D2 (0-5)], 19C0480-13[TP-D2 (5-10)], 19C0480-14[TP-C2 (0-5)], 19C0480-15[TP-C2 (5-10)], 19C0480-16[TP-D1 (0-5)], 19C0480-17[TP-D1 (5-10)], 19C0480-18[TP-C1 (0-5)], 19C0480-19[TP-C1 (5-10)], 19C0480-20[TP-B1 (0-5)], 19C0480-21[TP-B1 (5-10)], 19C0480-22[TP-B2 (0-5)], 19C0480-23[TP-B2 (5-10)], 19C0480-24[TP-A1 (0-5)], 19C0480-25[TP-A2 (5-10)], 19C0480-26[TP-A1 (5-10)], 19C0480-27[TP-A2 (0-5)], B225813-BLK1, B225813-BS1, B225813-BSD1, B225813-MS1, B225813-MSD1, B225814-BLK1, B225814-BS1, B225814-BSD1, B225814-MS1, B225814-MSD1, S033628-CCV1, S033630-CCV1, S033637-CCV1, S033640-CCV1

**Aniline**

19C0480-01[TP-C3 (0-5)], 19C0480-02[TP-C3 (5-10)], 19C0480-03[TP-D3 (0-5)], 19C0480-04[TP-D3 (5-10)], 19C0480-05[TP-D3 (10-15)], 19C0480-06[TP-E3 (0-5)], 19C0480-07[TP-E3 (5-10)], 19C0480-08[TP-F3 (0-5)], 19C0480-09[TP-F3 (5-10)], 19C0480-10[TP-E2 (0-5)], 19C0480-11[TP-E2 (5-10)], 19C0480-12[TP-D2 (0-5)], 19C0480-13[TP-D2 (5-10)], 19C0480-14[TP-C2 (0-5)], 19C0480-15[TP-C2 (5-10)], 19C0480-16[TP-D1 (0-5)], 19C0480-17[TP-D1 (5-10)], 19C0480-18[TP-C1 (0-5)], 19C0480-19[TP-C1 (5-10)], 19C0480-20[TP-B1 (0-5)], 19C0480-21[TP-B1 (5-10)], 19C0480-22[TP-B2 (0-5)], 19C0480-23[TP-B2 (5-10)], 19C0480-24[TP-A1 (0-5)], 19C0480-25[TP-A2 (5-10)], 19C0480-26[TP-A1 (5-10)], 19C0480-27[TP-A2 (0-5)], B225813-BLK1, B225813-BS1, B225813-BSD1, B225813-MS1, B225813-MSD1, B225814-BLK1, B225814-BS1, B225814-BSD1, B225814-MS1, B225814-MSD1, S033628-CCV1, S033630-CCV1, S033637-CCV1, S033640-CCV1

**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: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-C3 (0-5)

Sampled: 3/12/2019 07:40

Sample ID: 19C0480-01

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.11	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 1:20	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.0011	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 1:20	MFF
Benzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 1:20	MFF
Bromobenzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 1:20	MFF
Bromochloromethane	ND	0.0022	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 1:20	MFF
Bromodichloromethane	ND	0.0022	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 1:20	MFF
Bromoform	ND	0.0022	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 1:20	MFF
Bromomethane	ND	0.011	mg/Kg dry	1	V-34	SW-846 8260C	3/13/19	3/14/19 1:20	MFF
2-Butanone (MEK)	ND	0.043	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 1:20	MFF
n-Butylbenzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 1:20	MFF
sec-Butylbenzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 1:20	MFF
tert-Butylbenzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 1:20	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.0011	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 1:20	MFF
Carbon Disulfide	ND	0.0065	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 1:20	MFF
Carbon Tetrachloride	ND	0.0022	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 1:20	MFF
Chlorobenzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 1:20	MFF
Chlorodibromomethane	ND	0.0011	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 1:20	MFF
Chloroethane	ND	0.011	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 1:20	MFF
Chloroform	ND	0.0043	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 1:20	MFF
Chloromethane	ND	0.011	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 1:20	MFF
2-Chlorotoluene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 1:20	MFF
4-Chlorotoluene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 1:20	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0043	mg/Kg dry	1	V-05	SW-846 8260C	3/13/19	3/14/19 1:20	MFF
1,2-Dibromoethane (EDB)	ND	0.0011	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 1:20	MFF
Dibromomethane	ND	0.0022	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 1:20	MFF
1,2-Dichlorobenzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 1:20	MFF
1,3-Dichlorobenzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 1:20	MFF
1,4-Dichlorobenzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 1:20	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.011	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 1:20	MFF
1,1-Dichloroethane	ND	0.0022	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 1:20	MFF
1,2-Dichloroethane	ND	0.0022	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 1:20	MFF
1,1-Dichloroethylene	ND	0.0043	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 1:20	MFF
cis-1,2-Dichloroethylene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 1:20	MFF
trans-1,2-Dichloroethylene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 1:20	MFF
1,2-Dichloropropane	ND	0.0022	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 1:20	MFF
1,3-Dichloropropane	ND	0.0011	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 1:20	MFF
2,2-Dichloropropane	ND	0.0022	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 1:20	MFF
1,1-Dichloropropene	ND	0.0043	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 1:20	MFF
cis-1,3-Dichloropropene	ND	0.0011	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 1:20	MFF
trans-1,3-Dichloropropene	ND	0.0011	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 1:20	MFF
Diethyl Ether	ND	0.011	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 1:20	MFF
Diisopropyl Ether (DIPE)	ND	0.0011	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 1:20	MFF
1,4-Dioxane	ND	0.22	mg/Kg dry	1	V-16	SW-846 8260C	3/13/19	3/14/19 1:20	MFF
Ethylbenzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 1:20	MFF

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-C3 (0-5)

Sampled: 3/12/2019 07:40

Sample ID: 19C0480-01

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 1:20	MFF
2-Hexanone (MBK)	ND	0.022	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 1:20	MFF
Isopropylbenzene (Cumene)	ND	0.0022	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 1:20	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0022	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 1:20	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0043	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 1:20	MFF
Methylene Chloride	ND	0.011	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 1:20	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.022	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 1:20	MFF
Naphthalene	ND	0.0043	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 1:20	MFF
n-Propylbenzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 1:20	MFF
Styrene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 1:20	MFF
1,1,1,2-Tetrachloroethane	ND	0.0022	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 1:20	MFF
1,1,2,2-Tetrachloroethane	ND	0.0011	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 1:20	MFF
Tetrachloroethylene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 1:20	MFF
Tetrahydrofuran	ND	0.011	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 1:20	MFF
Toluene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 1:20	MFF
1,2,3-Trichlorobenzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 1:20	MFF
1,2,4-Trichlorobenzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 1:20	MFF
1,1,1-Trichloroethane	ND	0.0022	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 1:20	MFF
1,1,2-Trichloroethane	ND	0.0022	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 1:20	MFF
Trichloroethylene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 1:20	MFF
Trichlorofluoromethane (Freon 11)	ND	0.011	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 1:20	MFF
1,2,3-Trichloropropane	ND	0.0022	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 1:20	MFF
1,2,4-Trimethylbenzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 1:20	MFF
1,3,5-Trimethylbenzene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 1:20	MFF
Vinyl Chloride	ND	0.011	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 1:20	MFF
m+p Xylene	ND	0.0043	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 1:20	MFF
o-Xylene	ND	0.0022	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 1:20	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	88.3	70-130	
Toluene-d8	97.0	70-130	
4-Bromofluorobenzene	101	70-130	

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-C3 (0-5)

Sampled: 3/12/2019 07:40

Sample ID: 19C0480-01

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 23:52	IMR
Acenaphthylene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 23:52	IMR
Acetophenone	ND	3.7	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 23:52	IMR
Aniline	ND	3.7	mg/Kg dry	5	L-04, V-34	SW-846 8270D	3/15/19	3/18/19 23:52	IMR
Anthracene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 23:52	IMR
Benzo(a)anthracene	2.3	1.9	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 23:52	IMR
Benzo(a)pyrene	2.1	1.9	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 23:52	IMR
Benzo(b)fluoranthene	2.4	1.9	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 23:52	IMR
Benzo(g,h,i)perylene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 23:52	IMR
Benzo(k)fluoranthene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 23:52	IMR
Bis(2-chloroethoxy)methane	ND	3.7	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 23:52	IMR
Bis(2-chloroethyl)ether	ND	3.7	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 23:52	IMR
Bis(2-chloroisopropyl)ether	ND	3.7	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 23:52	IMR
Bis(2-Ethylhexyl)phthalate	ND	3.7	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 23:52	IMR
4-Bromophenylphenylether	ND	3.7	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 23:52	IMR
Butylbenzylphthalate	ND	3.7	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 23:52	IMR
4-Chloroaniline	ND	7.3	mg/Kg dry	5	V-34	SW-846 8270D	3/15/19	3/18/19 23:52	IMR
2-Chloronaphthalene	ND	3.7	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 23:52	IMR
2-Chlorophenol	ND	3.7	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 23:52	IMR
Chrysene	2.2	1.9	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 23:52	IMR
Dibenz(a,h)anthracene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 23:52	IMR
Dibenzofuran	ND	3.7	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 23:52	IMR
Di-n-butylphthalate	ND	3.7	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 23:52	IMR
1,2-Dichlorobenzene	ND	3.7	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 23:52	IMR
1,3-Dichlorobenzene	ND	3.7	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 23:52	IMR
1,4-Dichlorobenzene	ND	3.7	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 23:52	IMR
3,3-Dichlorobenzidine	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 23:52	IMR
2,4-Dichlorophenol	ND	3.7	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 23:52	IMR
Diethylphthalate	ND	3.7	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 23:52	IMR
2,4-Dimethylphenol	ND	3.7	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 23:52	IMR
Dimethylphthalate	ND	3.7	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 23:52	IMR
2,4-Dinitrophenol	ND	7.3	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 23:52	IMR
2,4-Dinitrotoluene	ND	3.7	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 23:52	IMR
2,6-Dinitrotoluene	ND	3.7	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 23:52	IMR
Di-n-octylphthalate	ND	3.7	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 23:52	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	3.7	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 23:52	IMR
Fluoranthene	4.8	1.9	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 23:52	IMR
Fluorene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 23:52	IMR
Hexachlorobenzene	ND	3.7	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 23:52	IMR
Hexachlorobutadiene	ND	3.7	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 23:52	IMR
Hexachloroethane	ND	3.7	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 23:52	IMR
Indeno(1,2,3-cd)pyrene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 23:52	IMR
Isophorone	ND	3.7	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 23:52	IMR
2-Methylnaphthalene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 23:52	IMR

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-C3 (0-5)

Sampled: 3/12/2019 07:40

Sample ID: 19C0480-01

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	3.7	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 23:52	IMR
3/4-Methylphenol	ND	3.7	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 23:52	IMR
Naphthalene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 23:52	IMR
Nitrobenzene	ND	3.7	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 23:52	IMR
2-Nitrophenol	ND	3.7	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 23:52	IMR
4-Nitrophenol	ND	7.3	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 23:52	IMR
Pentachlorophenol	ND	3.7	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 23:52	IMR
Phenanthrene	4.5	1.9	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 23:52	IMR
Phenol	ND	3.7	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 23:52	IMR
Pyrene	5.0	1.9	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 23:52	IMR
1,2,4-Trichlorobenzene	ND	3.7	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 23:52	IMR
2,4,5-Trichlorophenol	ND	3.7	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 23:52	IMR
2,4,6-Trichlorophenol	ND	3.7	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 23:52	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	87.7	30-130	
Phenol-d6	88.5	30-130	
Nitrobenzene-d5	88.0	30-130	
2-Fluorobiphenyl	98.5	30-130	
2,4,6-Tribromophenol	98.9	30-130	
p-Terphenyl-d14	118	30-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-C3 (0-5)

Sampled: 3/12/2019 07:40

Sample ID: 19C0480-01

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.088	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 13:56	JMB
Aroclor-1221 [1]	ND	0.088	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 13:56	JMB
Aroclor-1232 [1]	ND	0.088	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 13:56	JMB
Aroclor-1242 [1]	ND	0.088	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 13:56	JMB
Aroclor-1248 [1]	ND	0.088	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 13:56	JMB
Aroclor-1254 [1]	ND	0.088	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 13:56	JMB
Aroclor-1260 [1]	ND	0.088	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 13:56	JMB
Aroclor-1262 [1]	ND	0.088	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 13:56	JMB
Aroclor-1268 [1]	ND	0.088	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 13:56	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		72.5	30-150					3/18/19 13:56	
Decachlorobiphenyl [2]		79.3	30-150					3/18/19 13:56	
Tetrachloro-m-xylene [1]		86.8	30-150					3/18/19 13:56	
Tetrachloro-m-xylene [2]		87.9	30-150					3/18/19 13:56	

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-C3 (0-5)

Sampled: 3/12/2019 07:40

Sample ID: 19C0480-01

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	1700	370	mg/Kg dry	20		SW-846 8100 Modified	3/15/19	3/18/19 6:20	RMW
<b>Surrogates</b>		<b>% Recovery</b>	<b>Recovery Limits</b>		<b>Flag/Qual</b>				
2-Fluorobiphenyl		*	40-140		S-01			3/18/19 6:20	

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-C3 (0-5)

Sampled: 3/12/2019 07:40

Sample ID: 19C0480-01

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.8	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 12:28	QNW
Arsenic	4.5	1.8	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 12:28	QNW
Barium	30	1.8	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 12:28	QNW
Beryllium	0.28	0.18	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 12:28	QNW
Cadmium	0.29	0.18	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 12:28	QNW
Chromium	13	0.36	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 12:28	QNW
Lead	27	0.54	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 12:28	QNW
Mercury	0.048	0.026	mg/Kg dry	1		SW-846 7471B	3/13/19	3/14/19 14:27	TBC
Nickel	12	0.36	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 12:28	QNW
Selenium	ND	3.6	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 12:28	QNW
Silver	ND	0.36	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 12:28	QNW
Thallium	ND	1.8	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 12:28	QNW
Vanadium	32	0.73	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 12:28	QNW
Zinc	36	0.73	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 12:28	QNW



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-C3 (0-5)

Sampled: 3/12/2019 07:40

Sample ID: 19C0480-01

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	90.9		% Wt	1		SM 2540G	3/18/19	3/18/19 19:43	KMG
Ignitability	Absent		present/absent	1		SW-846 1030	3/14/19	3/14/19 11:10	KMV
pH @20.7°C	8.5		pH Units	1		SW-846 9045C	3/12/19	3/12/19 20:38	AIA
Reactive Cyanide	ND	4.0	mg/Kg	1		SW-846 9014	3/14/19	3/15/19 11:07	KMV
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	3/14/19	3/15/19 10:28	KMV
Specific conductance	20	2.0	µmhos/cm	1		SM21-22 2510B Modified	3/14/19	3/14/19 12:49	EC

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-C3 (5-10)

Sampled: 3/12/2019 07:45

Sample ID: 19C0480-02

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.082	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:52	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00082	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:52	MFF
Benzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:52	MFF
Bromobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:52	MFF
Bromochloromethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:52	MFF
Bromodichloromethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:52	MFF
Bromoform	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:52	MFF
Bromomethane	ND	0.0082	mg/Kg dry	1	V-34	SW-846 8260C	3/13/19	3/14/19 7:52	MFF
2-Butanone (MEK)	ND	0.033	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:52	MFF
n-Butylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:52	MFF
sec-Butylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:52	MFF
tert-Butylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:52	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00082	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:52	MFF
Carbon Disulfide	ND	0.0049	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:52	MFF
Carbon Tetrachloride	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:52	MFF
Chlorobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:52	MFF
Chlorodibromomethane	ND	0.00082	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:52	MFF
Chloroethane	ND	0.0082	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:52	MFF
Chloroform	ND	0.0033	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:52	MFF
Chloromethane	ND	0.0082	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:52	MFF
2-Chlorotoluene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:52	MFF
4-Chlorotoluene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:52	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:52	MFF
1,2-Dibromoethane (EDB)	ND	0.00082	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:52	MFF
Dibromomethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:52	MFF
1,2-Dichlorobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:52	MFF
1,3-Dichlorobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:52	MFF
1,4-Dichlorobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:52	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0082	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:52	MFF
1,1-Dichloroethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:52	MFF
1,2-Dichloroethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:52	MFF
1,1-Dichloroethylene	ND	0.0033	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:52	MFF
cis-1,2-Dichloroethylene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:52	MFF
trans-1,2-Dichloroethylene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:52	MFF
1,2-Dichloropropane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:52	MFF
1,3-Dichloropropane	ND	0.00082	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:52	MFF
2,2-Dichloropropane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:52	MFF
1,1-Dichloropropene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:52	MFF
cis-1,3-Dichloropropene	ND	0.00082	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:52	MFF
trans-1,3-Dichloropropene	ND	0.00082	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:52	MFF
Diethyl Ether	ND	0.0082	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:52	MFF
Diisopropyl Ether (DIPE)	ND	0.00082	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:52	MFF
1,4-Dioxane	ND	0.082	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:52	MFF
Ethylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:52	MFF

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-C3 (5-10)

Sampled: 3/12/2019 07:45

Sample ID: 19C0480-02

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:52	MFF
2-Hexanone (MBK)	ND	0.016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:52	MFF
Isopropylbenzene (Cumene)	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:52	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:52	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0033	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:52	MFF
Methylene Chloride	ND	0.0082	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:52	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:52	MFF
Naphthalene	ND	0.0033	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:52	MFF
n-Propylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:52	MFF
Styrene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:52	MFF
1,1,1,2-Tetrachloroethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:52	MFF
1,1,2,2-Tetrachloroethane	ND	0.00082	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:52	MFF
Tetrachloroethylene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:52	MFF
Tetrahydrofuran	ND	0.0082	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:52	MFF
Toluene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:52	MFF
1,2,3-Trichlorobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:52	MFF
1,2,4-Trichlorobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:52	MFF
1,1,1-Trichloroethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:52	MFF
1,1,2-Trichloroethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:52	MFF
Trichloroethylene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:52	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0082	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:52	MFF
1,2,3-Trichloropropane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:52	MFF
1,2,4-Trimethylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:52	MFF
1,3,5-Trimethylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:52	MFF
Vinyl Chloride	ND	0.0082	mg/Kg dry	1	L-04	SW-846 8260C	3/13/19	3/14/19 7:52	MFF
m+p Xylene	ND	0.0033	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:52	MFF
o-Xylene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 7:52	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	101	70-130	
Toluene-d8	93.1	70-130	
4-Bromofluorobenzene	96.3	70-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-C3 (5-10)

Sampled: 3/12/2019 07:45

Sample ID: 19C0480-02

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.38	mg/Kg dry	2		SW-846 8270D	3/15/19	3/19/19 0:23	IMR
Acenaphthylene	0.56	0.38	mg/Kg dry	2		SW-846 8270D	3/15/19	3/19/19 0:23	IMR
Acetophenone	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/15/19	3/19/19 0:23	IMR
Aniline	ND	0.75	mg/Kg dry	2	L-04, V-34	SW-846 8270D	3/15/19	3/19/19 0:23	IMR
Anthracene	0.91	0.38	mg/Kg dry	2		SW-846 8270D	3/15/19	3/19/19 0:23	IMR
Benzo(a)anthracene	3.0	0.38	mg/Kg dry	2		SW-846 8270D	3/15/19	3/19/19 0:23	IMR
Benzo(a)pyrene	2.9	0.38	mg/Kg dry	2		SW-846 8270D	3/15/19	3/19/19 0:23	IMR
Benzo(b)fluoranthene	3.3	0.38	mg/Kg dry	2		SW-846 8270D	3/15/19	3/19/19 0:23	IMR
Benzo(g,h,i)perylene	1.3	0.38	mg/Kg dry	2		SW-846 8270D	3/15/19	3/19/19 0:23	IMR
Benzo(k)fluoranthene	1.3	0.38	mg/Kg dry	2		SW-846 8270D	3/15/19	3/19/19 0:23	IMR
Bis(2-chloroethoxy)methane	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/15/19	3/19/19 0:23	IMR
Bis(2-chloroethyl)ether	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/15/19	3/19/19 0:23	IMR
Bis(2-chloroisopropyl)ether	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/15/19	3/19/19 0:23	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/15/19	3/19/19 0:23	IMR
4-Bromophenylphenylether	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/15/19	3/19/19 0:23	IMR
Butylbenzylphthalate	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/15/19	3/19/19 0:23	IMR
4-Chloroaniline	ND	1.5	mg/Kg dry	2	V-34	SW-846 8270D	3/15/19	3/19/19 0:23	IMR
2-Chloronaphthalene	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/15/19	3/19/19 0:23	IMR
2-Chlorophenol	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/15/19	3/19/19 0:23	IMR
Chrysene	2.7	0.38	mg/Kg dry	2		SW-846 8270D	3/15/19	3/19/19 0:23	IMR
Dibenz(a,h)anthracene	ND	0.38	mg/Kg dry	2		SW-846 8270D	3/15/19	3/19/19 0:23	IMR
Dibenzofuran	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/15/19	3/19/19 0:23	IMR
Di-n-butylphthalate	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/15/19	3/19/19 0:23	IMR
1,2-Dichlorobenzene	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/15/19	3/19/19 0:23	IMR
1,3-Dichlorobenzene	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/15/19	3/19/19 0:23	IMR
1,4-Dichlorobenzene	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/15/19	3/19/19 0:23	IMR
3,3-Dichlorobenzidine	ND	0.38	mg/Kg dry	2		SW-846 8270D	3/15/19	3/19/19 0:23	IMR
2,4-Dichlorophenol	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/15/19	3/19/19 0:23	IMR
Diethylphthalate	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/15/19	3/19/19 0:23	IMR
2,4-Dimethylphenol	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/15/19	3/19/19 0:23	IMR
Dimethylphthalate	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/15/19	3/19/19 0:23	IMR
2,4-Dinitrophenol	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/15/19	3/19/19 0:23	IMR
2,4-Dinitrotoluene	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/15/19	3/19/19 0:23	IMR
2,6-Dinitrotoluene	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/15/19	3/19/19 0:23	IMR
Di-n-octylphthalate	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/15/19	3/19/19 0:23	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/15/19	3/19/19 0:23	IMR
Fluoranthene	6.0	0.38	mg/Kg dry	2		SW-846 8270D	3/15/19	3/19/19 0:23	IMR
Fluorene	0.39	0.38	mg/Kg dry	2		SW-846 8270D	3/15/19	3/19/19 0:23	IMR
Hexachlorobenzene	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/15/19	3/19/19 0:23	IMR
Hexachlorobutadiene	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/15/19	3/19/19 0:23	IMR
Hexachloroethane	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/15/19	3/19/19 0:23	IMR
Indeno(1,2,3-cd)pyrene	1.5	0.38	mg/Kg dry	2		SW-846 8270D	3/15/19	3/19/19 0:23	IMR
Isophorone	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/15/19	3/19/19 0:23	IMR
2-Methylnaphthalene	ND	0.38	mg/Kg dry	2		SW-846 8270D	3/15/19	3/19/19 0:23	IMR

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-C3 (5-10)

Sampled: 3/12/2019 07:45

Sample ID: 19C0480-02

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/15/19	3/19/19 0:23	IMR
3/4-Methylphenol	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/15/19	3/19/19 0:23	IMR
Naphthalene	ND	0.38	mg/Kg dry	2		SW-846 8270D	3/15/19	3/19/19 0:23	IMR
Nitrobenzene	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/15/19	3/19/19 0:23	IMR
2-Nitrophenol	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/15/19	3/19/19 0:23	IMR
4-Nitrophenol	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/15/19	3/19/19 0:23	IMR
Pentachlorophenol	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/15/19	3/19/19 0:23	IMR
Phenanthrene	3.1	0.38	mg/Kg dry	2		SW-846 8270D	3/15/19	3/19/19 0:23	IMR
Phenol	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/15/19	3/19/19 0:23	IMR
Pyrene	6.4	0.38	mg/Kg dry	2		SW-846 8270D	3/15/19	3/19/19 0:23	IMR
1,2,4-Trichlorobenzene	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/15/19	3/19/19 0:23	IMR
2,4,5-Trichlorophenol	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/15/19	3/19/19 0:23	IMR
2,4,6-Trichlorophenol	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/15/19	3/19/19 0:23	IMR
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2-Fluorophenol		72.1	30-130					3/19/19 0:23	
Phenol-d6		73.9	30-130					3/19/19 0:23	
Nitrobenzene-d5		70.8	30-130					3/19/19 0:23	
2-Fluorobiphenyl		75.7	30-130					3/19/19 0:23	
2,4,6-Tribromophenol		80.9	30-130					3/19/19 0:23	
p-Terphenyl-d14		92.9	30-130					3/19/19 0:23	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-C3 (5-10)

Sampled: 3/12/2019 07:45

Sample ID: 19C0480-02

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 14:14	JMB
Aroclor-1221 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 14:14	JMB
Aroclor-1232 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 14:14	JMB
Aroclor-1242 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 14:14	JMB
Aroclor-1248 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 14:14	JMB
Aroclor-1254 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 14:14	JMB
Aroclor-1260 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 14:14	JMB
Aroclor-1262 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 14:14	JMB
Aroclor-1268 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 14:14	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		74.6	30-150					3/18/19 14:14	
Decachlorobiphenyl [2]		83.7	30-150					3/18/19 14:14	
Tetrachloro-m-xylene [1]		94.6	30-150					3/18/19 14:14	
Tetrachloro-m-xylene [2]		95.6	30-150					3/18/19 14:14	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-C3 (5-10)

Sampled: 3/12/2019 07:45

Sample ID: 19C0480-02

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	1100	180	mg/Kg dry	20		SW-846 8100 Modified	3/15/19	3/18/19 5:20	RMW
<b>Surrogates</b>		<b>% Recovery</b>	<b>Recovery Limits</b>		<b>Flag/Qual</b>				
2-Fluorobiphenyl		*	40-140		S-01			3/18/19 5:20	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-C3 (5-10)

Sampled: 3/12/2019 07:45

Sample ID: 19C0480-02

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 12:33	QNW
Arsenic	3.5	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 12:33	QNW
Barium	35	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 12:33	QNW
Beryllium	0.34	0.19	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 12:33	QNW
Cadmium	0.30	0.19	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 12:33	QNW
Chromium	16	0.37	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 12:33	QNW
Lead	43	0.56	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 12:33	QNW
Mercury	0.053	0.027	mg/Kg dry	1		SW-846 7471B	3/13/19	3/14/19 16:09	TBC
Nickel	13	0.37	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 12:33	QNW
Selenium	ND	3.7	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 12:33	QNW
Silver	ND	0.37	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 12:33	QNW
Thallium	ND	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 12:33	QNW
Vanadium	31	0.74	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 12:33	QNW
Zinc	52	0.74	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 12:33	QNW



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-C3 (5-10)

Sampled: 3/12/2019 07:45

Sample ID: 19C0480-02

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	90.2		% Wt	1		SM 2540G	3/18/19	3/18/19 19:43	KMG
Ignitability	Absent		present/absent	1		SW-846 1030	3/14/19	3/14/19 11:10	KMV
pH @20.8°C	7.9		pH Units	1		SW-846 9045C	3/12/19	3/12/19 20:38	AIA
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	3/16/19	3/18/19 13:15	DJM
Reactive Sulfide	ND	19	mg/Kg	1		SW-846 9030A	3/16/19	3/18/19 13:15	DJM
Specific conductance	17	2.0	µmhos/cm	1		SM21-22 2510B Modified	3/14/19	3/14/19 12:49	EC

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-D3 (0-5)

Sampled: 3/12/2019 08:10

Sample ID: 19C0480-03

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.10	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:17	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.0010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:17	MFF
Benzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:17	MFF
Bromobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:17	MFF
Bromochloromethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:17	MFF
Bromodichloromethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:17	MFF
Bromoform	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:17	MFF
Bromomethane	ND	0.010	mg/Kg dry	1	V-34	SW-846 8260C	3/13/19	3/14/19 8:17	MFF
2-Butanone (MEK)	ND	0.041	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:17	MFF
n-Butylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:17	MFF
sec-Butylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:17	MFF
tert-Butylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:17	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.0010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:17	MFF
Carbon Disulfide	ND	0.0061	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:17	MFF
Carbon Tetrachloride	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:17	MFF
Chlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:17	MFF
Chlorodibromomethane	ND	0.0010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:17	MFF
Chloroethane	ND	0.010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:17	MFF
Chloroform	ND	0.0041	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:17	MFF
Chloromethane	ND	0.010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:17	MFF
2-Chlorotoluene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:17	MFF
4-Chlorotoluene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:17	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:17	MFF
1,2-Dibromoethane (EDB)	ND	0.0010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:17	MFF
Dibromomethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:17	MFF
1,2-Dichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:17	MFF
1,3-Dichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:17	MFF
1,4-Dichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:17	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:17	MFF
1,1-Dichloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:17	MFF
1,2-Dichloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:17	MFF
1,1-Dichloroethylene	ND	0.0041	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:17	MFF
cis-1,2-Dichloroethylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:17	MFF
trans-1,2-Dichloroethylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:17	MFF
1,2-Dichloropropane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:17	MFF
1,3-Dichloropropane	ND	0.0010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:17	MFF
2,2-Dichloropropane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:17	MFF
1,1-Dichloropropene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:17	MFF
cis-1,3-Dichloropropene	ND	0.0010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:17	MFF
trans-1,3-Dichloropropene	ND	0.0010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:17	MFF
Diethyl Ether	ND	0.010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:17	MFF
Diisopropyl Ether (DIPE)	ND	0.0010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:17	MFF
1,4-Dioxane	ND	0.10	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:17	MFF
Ethylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:17	MFF

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-D3 (0-5)

Sampled: 3/12/2019 08:10

Sample ID: 19C0480-03

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:17	MFF
2-Hexanone (MBK)	ND	0.020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:17	MFF
Isopropylbenzene (Cumene)	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:17	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:17	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0041	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:17	MFF
Methylene Chloride	ND	0.010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:17	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:17	MFF
Naphthalene	ND	0.0041	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:17	MFF
n-Propylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:17	MFF
Styrene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:17	MFF
1,1,1,2-Tetrachloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:17	MFF
1,1,2,2-Tetrachloroethane	ND	0.0010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:17	MFF
Tetrachloroethylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:17	MFF
Tetrahydrofuran	ND	0.010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:17	MFF
Toluene	0.0022	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:17	MFF
1,2,3-Trichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:17	MFF
1,2,4-Trichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:17	MFF
1,1,1-Trichloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:17	MFF
1,1,2-Trichloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:17	MFF
Trichloroethylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:17	MFF
Trichlorofluoromethane (Freon 11)	ND	0.010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:17	MFF
1,2,3-Trichloropropane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:17	MFF
1,2,4-Trimethylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:17	MFF
1,3,5-Trimethylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:17	MFF
Vinyl Chloride	ND	0.010	mg/Kg dry	1	L-04	SW-846 8260C	3/13/19	3/14/19 8:17	MFF
m+p Xylene	ND	0.0041	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:17	MFF
o-Xylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:17	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	100	70-130	
Toluene-d8	93.2	70-130	
4-Bromofluorobenzene	94.3	70-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-D3 (0-5)

Sampled: 3/12/2019 08:10

Sample ID: 19C0480-03

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.41	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 9:40	IMR
Acenaphthylene	ND	0.41	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 9:40	IMR
Acetophenone	ND	0.82	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 9:40	IMR
Aniline	ND	0.82	mg/Kg dry	1	L-04, V-34	SW-846 8270D	3/15/19	3/19/19 9:40	IMR
Anthracene	ND	0.41	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 9:40	IMR
Benzo(a)anthracene	0.82	0.41	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 9:40	IMR
Benzo(a)pyrene	0.88	0.41	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 9:40	IMR
Benzo(b)fluoranthene	1.0	0.41	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 9:40	IMR
Benzo(g,h,i)perylene	0.64	0.41	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 9:40	IMR
Benzo(k)fluoranthene	ND	0.41	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 9:40	IMR
Bis(2-chloroethoxy)methane	ND	0.82	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 9:40	IMR
Bis(2-chloroethyl)ether	ND	0.82	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 9:40	IMR
Bis(2-chloroisopropyl)ether	ND	0.82	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 9:40	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.82	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 9:40	IMR
4-Bromophenylphenylether	ND	0.82	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 9:40	IMR
Butylbenzylphthalate	ND	0.82	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 9:40	IMR
4-Chloroaniline	ND	1.6	mg/Kg dry	1	V-34	SW-846 8270D	3/15/19	3/19/19 9:40	IMR
2-Chloronaphthalene	ND	0.82	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 9:40	IMR
2-Chlorophenol	ND	0.82	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 9:40	IMR
Chrysene	0.83	0.41	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 9:40	IMR
Dibenz(a,h)anthracene	ND	0.41	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 9:40	IMR
Dibenzofuran	ND	0.82	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 9:40	IMR
Di-n-butylphthalate	ND	0.82	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 9:40	IMR
1,2-Dichlorobenzene	ND	0.82	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 9:40	IMR
1,3-Dichlorobenzene	ND	0.82	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 9:40	IMR
1,4-Dichlorobenzene	ND	0.82	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 9:40	IMR
3,3-Dichlorobenzidine	ND	0.41	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 9:40	IMR
2,4-Dichlorophenol	ND	0.82	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 9:40	IMR
Diethylphthalate	ND	0.82	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 9:40	IMR
2,4-Dimethylphenol	ND	0.82	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 9:40	IMR
Dimethylphthalate	ND	0.82	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 9:40	IMR
2,4-Dinitrophenol	ND	1.6	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 9:40	IMR
2,4-Dinitrotoluene	ND	0.82	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 9:40	IMR
2,6-Dinitrotoluene	ND	0.82	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 9:40	IMR
Di-n-octylphthalate	ND	0.82	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 9:40	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.82	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 9:40	IMR
Fluoranthene	1.7	0.41	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 9:40	IMR
Fluorene	ND	0.41	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 9:40	IMR
Hexachlorobenzene	ND	0.82	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 9:40	IMR
Hexachlorobutadiene	ND	0.82	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 9:40	IMR
Hexachloroethane	ND	0.82	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 9:40	IMR
Indeno(1,2,3-cd)pyrene	0.61	0.41	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 9:40	IMR
Isophorone	ND	0.82	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 9:40	IMR
2-Methylnaphthalene	ND	0.41	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 9:40	IMR

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-D3 (0-5)

Sampled: 3/12/2019 08:10

Sample ID: 19C0480-03

Sample Matrix: Soil

Sample Flags: RL-08

**Semivolatile Organic Compounds by GC/MS**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	0.82	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 9:40	IMR
3/4-Methylphenol	ND	0.82	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 9:40	IMR
Naphthalene	ND	0.41	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 9:40	IMR
Nitrobenzene	ND	0.82	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 9:40	IMR
2-Nitrophenol	ND	0.82	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 9:40	IMR
4-Nitrophenol	ND	1.6	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 9:40	IMR
Pentachlorophenol	ND	0.82	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 9:40	IMR
Phenanthrene	1.1	0.41	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 9:40	IMR
Phenol	ND	0.82	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 9:40	IMR
Pyrene	1.7	0.41	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 9:40	IMR
1,2,4-Trichlorobenzene	ND	0.82	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 9:40	IMR
2,4,5-Trichlorophenol	ND	0.82	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 9:40	IMR
2,4,6-Trichlorophenol	ND	0.82	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 9:40	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	86.3	30-130	
Phenol-d6	88.0	30-130	
Nitrobenzene-d5	85.3	30-130	
2-Fluorobiphenyl	94.0	30-130	
2,4,6-Tribromophenol	97.2	30-130	
p-Terphenyl-d14	106	30-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-D3 (0-5)

Sampled: 3/12/2019 08:10

Sample ID: 19C0480-03

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.097	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 14:32	JMB
Aroclor-1221 [1]	ND	0.097	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 14:32	JMB
Aroclor-1232 [1]	ND	0.097	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 14:32	JMB
Aroclor-1242 [1]	ND	0.097	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 14:32	JMB
Aroclor-1248 [1]	ND	0.097	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 14:32	JMB
Aroclor-1254 [1]	ND	0.097	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 14:32	JMB
Aroclor-1260 [1]	ND	0.097	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 14:32	JMB
Aroclor-1262 [1]	ND	0.097	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 14:32	JMB
Aroclor-1268 [1]	ND	0.097	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 14:32	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		74.5	30-150					3/18/19 14:32	
Decachlorobiphenyl [2]		82.0	30-150					3/18/19 14:32	
Tetrachloro-m-xylene [1]		91.7	30-150					3/18/19 14:32	
Tetrachloro-m-xylene [2]		90.6	30-150					3/18/19 14:32	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-D3 (0-5)

Sampled: 3/12/2019 08:10

Sample ID: 19C0480-03

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	840	200	mg/Kg dry	10		SW-846 8100 Modified	3/15/19	3/19/19 12:50	RMW
<b>Surrogates</b>		<b>% Recovery</b>	<b>Recovery Limits</b>		<b>Flag/Qual</b>				
2-Fluorobiphenyl		61.3	40-140					3/19/19 12:50	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-D3 (0-5)

Sampled: 3/12/2019 08:10

Sample ID: 19C0480-03

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	2.0	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 12:38	QNW
Arsenic	6.2	2.0	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 12:38	QNW
Barium	38	2.0	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 12:38	QNW
Beryllium	0.40	0.20	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 12:38	QNW
Cadmium	0.42	0.20	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 12:38	QNW
Chromium	18	0.39	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 12:38	QNW
Lead	45	0.59	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 12:38	QNW
Mercury	0.086	0.029	mg/Kg dry	1		SW-846 7471B	3/13/19	3/14/19 16:10	TBC
Nickel	13	0.39	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 12:38	QNW
Selenium	ND	3.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 12:38	QNW
Silver	ND	0.39	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 12:38	QNW
Thallium	ND	2.0	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 12:38	QNW
Vanadium	26	0.79	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 12:38	QNW
Zinc	82	0.79	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 12:38	QNW



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-D3 (0-5)

Sampled: 3/12/2019 08:10

Sample ID: 19C0480-03

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	82.8		% Wt	1		SM 2540G	3/18/19	3/18/19 19:43	KMG
Ignitability	Absent		present/absent	1		SW-846 1030	3/14/19	3/14/19 11:10	KMV
pH @20.6°C	7.7		pH Units	1		SW-846 9045C	3/12/19	3/12/19 20:38	AIA
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	3/14/19	3/15/19 11:07	KMV
Reactive Sulfide	ND	19	mg/Kg	1		SW-846 9030A	3/14/19	3/15/19 10:28	KMV
Specific conductance	11	2.0	µmhos/cm	1		SM21-22 2510B Modified	3/14/19	3/14/19 12:49	EC

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-D3 (5-10)

Sampled: 3/12/2019 08:15

Sample ID: 19C0480-04

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.090	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:41	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00090	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:41	MFF
Benzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:41	MFF
Bromobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:41	MFF
Bromochloromethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:41	MFF
Bromodichloromethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:41	MFF
Bromoform	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:41	MFF
Bromomethane	ND	0.0090	mg/Kg dry	1	V-34	SW-846 8260C	3/13/19	3/14/19 8:41	MFF
2-Butanone (MEK)	ND	0.036	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:41	MFF
n-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:41	MFF
sec-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:41	MFF
tert-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:41	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00090	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:41	MFF
Carbon Disulfide	ND	0.0054	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:41	MFF
Carbon Tetrachloride	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:41	MFF
Chlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:41	MFF
Chlorodibromomethane	ND	0.00090	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:41	MFF
Chloroethane	ND	0.0090	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:41	MFF
Chloroform	ND	0.0036	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:41	MFF
Chloromethane	ND	0.0090	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:41	MFF
2-Chlorotoluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:41	MFF
4-Chlorotoluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:41	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:41	MFF
1,2-Dibromoethane (EDB)	ND	0.00090	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:41	MFF
Dibromomethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:41	MFF
1,2-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:41	MFF
1,3-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:41	MFF
1,4-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:41	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0090	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:41	MFF
1,1-Dichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:41	MFF
1,2-Dichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:41	MFF
1,1-Dichloroethylene	ND	0.0036	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:41	MFF
cis-1,2-Dichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:41	MFF
trans-1,2-Dichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:41	MFF
1,2-Dichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:41	MFF
1,3-Dichloropropane	ND	0.00090	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:41	MFF
2,2-Dichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:41	MFF
1,1-Dichloropropene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:41	MFF
cis-1,3-Dichloropropene	ND	0.00090	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:41	MFF
trans-1,3-Dichloropropene	ND	0.00090	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:41	MFF
Diethyl Ether	ND	0.0090	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:41	MFF
Diisopropyl Ether (DIPE)	ND	0.00090	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:41	MFF
1,4-Dioxane	ND	0.090	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:41	MFF
Ethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:41	MFF

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-D3 (5-10)

Sampled: 3/12/2019 08:15

Sample ID: 19C0480-04

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:41	MFF
2-Hexanone (MBK)	ND	0.018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:41	MFF
Isopropylbenzene (Cumene)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:41	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:41	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0036	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:41	MFF
Methylene Chloride	ND	0.0090	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:41	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:41	MFF
Naphthalene	ND	0.0036	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:41	MFF
n-Propylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:41	MFF
Styrene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:41	MFF
1,1,1,2-Tetrachloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:41	MFF
1,1,2,2-Tetrachloroethane	ND	0.00090	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:41	MFF
Tetrachloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:41	MFF
Tetrahydrofuran	ND	0.0090	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:41	MFF
Toluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:41	MFF
1,2,3-Trichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:41	MFF
1,2,4-Trichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:41	MFF
1,1,1-Trichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:41	MFF
1,1,2-Trichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:41	MFF
Trichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:41	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0090	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:41	MFF
1,2,3-Trichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:41	MFF
1,2,4-Trimethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:41	MFF
1,3,5-Trimethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:41	MFF
Vinyl Chloride	ND	0.0090	mg/Kg dry	1	L-04	SW-846 8260C	3/13/19	3/14/19 8:41	MFF
m+p Xylene	ND	0.0036	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:41	MFF
o-Xylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 8:41	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	104	70-130	
Toluene-d8	93.9	70-130	
4-Bromofluorobenzene	94.7	70-130	

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-D3 (5-10)

Sampled: 3/12/2019 08:15

Sample ID: 19C0480-04

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatle Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 10:08	IMR
Acenaphthylene	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 10:08	IMR
Acetophenone	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 10:08	IMR
Aniline	ND	0.78	mg/Kg dry	1	L-04, V-34	SW-846 8270D	3/15/19	3/19/19 10:08	IMR
Anthracene	0.40	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 10:08	IMR
Benzo(a)anthracene	1.1	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 10:08	IMR
Benzo(a)pyrene	1.3	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 10:08	IMR
Benzo(b)fluoranthene	1.4	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 10:08	IMR
Benzo(g,h,i)perylene	0.82	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 10:08	IMR
Benzo(k)fluoranthene	0.59	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 10:08	IMR
Bis(2-chloroethoxy)methane	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 10:08	IMR
Bis(2-chloroethyl)ether	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 10:08	IMR
Bis(2-chloroisopropyl)ether	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 10:08	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 10:08	IMR
4-Bromophenylphenylether	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 10:08	IMR
Butylbenzylphthalate	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 10:08	IMR
4-Chloroaniline	ND	1.5	mg/Kg dry	1	V-34	SW-846 8270D	3/15/19	3/19/19 10:08	IMR
2-Chloronaphthalene	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 10:08	IMR
2-Chlorophenol	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 10:08	IMR
Chrysene	1.2	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 10:08	IMR
Dibenz(a,h)anthracene	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 10:08	IMR
Dibenzofuran	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 10:08	IMR
Di-n-butylphthalate	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 10:08	IMR
1,2-Dichlorobenzene	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 10:08	IMR
1,3-Dichlorobenzene	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 10:08	IMR
1,4-Dichlorobenzene	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 10:08	IMR
3,3-Dichlorobenzidine	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 10:08	IMR
2,4-Dichlorophenol	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 10:08	IMR
Diethylphthalate	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 10:08	IMR
2,4-Dimethylphenol	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 10:08	IMR
Dimethylphthalate	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 10:08	IMR
2,4-Dinitrophenol	ND	1.5	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 10:08	IMR
2,4-Dinitrotoluene	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 10:08	IMR
2,6-Dinitrotoluene	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 10:08	IMR
Di-n-octylphthalate	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 10:08	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 10:08	IMR
Fluoranthene	2.2	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 10:08	IMR
Fluorene	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 10:08	IMR
Hexachlorobenzene	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 10:08	IMR
Hexachlorobutadiene	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 10:08	IMR
Hexachloroethane	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 10:08	IMR
Indeno(1,2,3-cd)pyrene	0.80	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 10:08	IMR
Isophorone	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 10:08	IMR
2-Methylnaphthalene	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 10:08	IMR

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-D3 (5-10)

Sampled: 3/12/2019 08:15

Sample ID: 19C0480-04

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 10:08	IMR
3/4-Methylphenol	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 10:08	IMR
Naphthalene	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 10:08	IMR
Nitrobenzene	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 10:08	IMR
2-Nitrophenol	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 10:08	IMR
4-Nitrophenol	ND	1.5	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 10:08	IMR
Pentachlorophenol	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 10:08	IMR
Phenanthrene	1.4	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 10:08	IMR
Phenol	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 10:08	IMR
Pyrene	2.5	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 10:08	IMR
1,2,4-Trichlorobenzene	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 10:08	IMR
2,4,5-Trichlorophenol	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 10:08	IMR
2,4,6-Trichlorophenol	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 10:08	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	80.1	30-130	3/19/19 10:08
Phenol-d6	79.9	30-130	3/19/19 10:08
Nitrobenzene-d5	81.1	30-130	3/19/19 10:08
2-Fluorobiphenyl	86.2	30-130	3/19/19 10:08
2,4,6-Tribromophenol	88.5	30-130	3/19/19 10:08
p-Terphenyl-d14	100	30-130	3/19/19 10:08

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-D3 (5-10)

Sampled: 3/12/2019 08:15

Sample ID: 19C0480-04

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.093	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 14:49	JMB
Aroclor-1221 [1]	ND	0.093	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 14:49	JMB
Aroclor-1232 [1]	ND	0.093	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 14:49	JMB
Aroclor-1242 [1]	ND	0.093	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 14:49	JMB
Aroclor-1248 [1]	ND	0.093	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 14:49	JMB
Aroclor-1254 [1]	ND	0.093	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 14:49	JMB
Aroclor-1260 [1]	ND	0.093	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 14:49	JMB
Aroclor-1262 [1]	ND	0.093	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 14:49	JMB
Aroclor-1268 [1]	ND	0.093	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 14:49	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		77.8	30-150					3/18/19 14:49	
Decachlorobiphenyl [2]		85.2	30-150					3/18/19 14:49	
Tetrachloro-m-xylene [1]		95.1	30-150					3/18/19 14:49	
Tetrachloro-m-xylene [2]		94.4	30-150					3/18/19 14:49	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-D3 (5-10)

Sampled: 3/12/2019 08:15

Sample ID: 19C0480-04

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	1100	380	mg/Kg dry	20		SW-846 8100 Modified	3/15/19	3/19/19 10:00	RMW
Surrogates	% Recovery		Recovery Limits	Flag/Qual					
2-Fluorobiphenyl	*		40-140	S-01		3/19/19 10:00			

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-D3 (5-10)

Sampled: 3/12/2019 08:15

Sample ID: 19C0480-04

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 12:54	QNW
Arsenic	9.1	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 12:54	QNW
Barium	30	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 12:54	QNW
Beryllium	0.32	0.19	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 12:54	QNW
Cadmium	0.57	0.19	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 12:54	QNW
Chromium	14	0.39	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 12:54	QNW
Lead	110	0.58	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 12:54	QNW
Mercury	0.071	0.027	mg/Kg dry	1		SW-846 7471B	3/13/19	3/14/19 16:12	TBC
Nickel	10	0.39	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 12:54	QNW
Selenium	ND	3.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 12:54	QNW
Silver	ND	0.39	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 12:54	QNW
Thallium	ND	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 12:54	QNW
Vanadium	21	0.78	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 12:54	QNW
Zinc	68	0.78	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 12:54	QNW



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-D3 (5-10)

Sampled: 3/12/2019 08:15

Sample ID: 19C0480-04

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	85.8		% Wt	1		SM 2540G	3/18/19	3/18/19 19:44	KMG
Ignitability	Absent		present/absent	1		SW-846 1030	3/14/19	3/14/19 11:10	KMV
pH @20.1°C	7.7		pH Units	1		SW-846 9045C	3/12/19	3/12/19 19:57	AIA
Reactive Cyanide	ND	4.0	mg/Kg	1		SW-846 9014	3/14/19	3/15/19 11:07	KMV
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	3/14/19	3/15/19 10:28	KMV
Specific conductance	8.0	2.0	µmhos/cm	1		SM21-22 2510B Modified	3/14/19	3/14/19 12:49	EC

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-D3 (10-15)

Sampled: 3/12/2019 08:30

Sample ID: 19C0480-05

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.10	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:06	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.0010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:06	MFF
Benzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:06	MFF
Bromobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:06	MFF
Bromochloromethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:06	MFF
Bromodichloromethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:06	MFF
Bromoform	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:06	MFF
Bromomethane	ND	0.010	mg/Kg dry	1	V-34	SW-846 8260C	3/13/19	3/14/19 9:06	MFF
2-Butanone (MEK)	ND	0.042	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:06	MFF
n-Butylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:06	MFF
sec-Butylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:06	MFF
tert-Butylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:06	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.0010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:06	MFF
Carbon Disulfide	ND	0.0063	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:06	MFF
Carbon Tetrachloride	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:06	MFF
Chlorobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:06	MFF
Chlorodibromomethane	ND	0.0010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:06	MFF
Chloroethane	ND	0.010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:06	MFF
Chloroform	ND	0.0042	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:06	MFF
Chloromethane	ND	0.010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:06	MFF
2-Chlorotoluene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:06	MFF
4-Chlorotoluene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:06	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:06	MFF
1,2-Dibromoethane (EDB)	ND	0.0010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:06	MFF
Dibromomethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:06	MFF
1,2-Dichlorobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:06	MFF
1,3-Dichlorobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:06	MFF
1,4-Dichlorobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:06	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:06	MFF
1,1-Dichloroethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:06	MFF
1,2-Dichloroethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:06	MFF
1,1-Dichloroethylene	ND	0.0042	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:06	MFF
cis-1,2-Dichloroethylene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:06	MFF
trans-1,2-Dichloroethylene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:06	MFF
1,2-Dichloropropane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:06	MFF
1,3-Dichloropropane	ND	0.0010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:06	MFF
2,2-Dichloropropane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:06	MFF
1,1-Dichloropropene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:06	MFF
cis-1,3-Dichloropropene	ND	0.0010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:06	MFF
trans-1,3-Dichloropropene	ND	0.0010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:06	MFF
Diethyl Ether	ND	0.010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:06	MFF
Diisopropyl Ether (DIPE)	ND	0.0010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:06	MFF
1,4-Dioxane	ND	0.10	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:06	MFF
Ethylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:06	MFF

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-D3 (10-15)

Sampled: 3/12/2019 08:30

Sample ID: 19C0480-05

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:06	MFF
2-Hexanone (MBK)	ND	0.021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:06	MFF
Isopropylbenzene (Cumene)	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:06	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:06	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0042	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:06	MFF
Methylene Chloride	ND	0.010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:06	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:06	MFF
Naphthalene	ND	0.0042	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:06	MFF
n-Propylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:06	MFF
Styrene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:06	MFF
1,1,1,2-Tetrachloroethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:06	MFF
1,1,2,2-Tetrachloroethane	ND	0.0010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:06	MFF
Tetrachloroethylene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:06	MFF
Tetrahydrofuran	ND	0.010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:06	MFF
Toluene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:06	MFF
1,2,3-Trichlorobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:06	MFF
1,2,4-Trichlorobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:06	MFF
1,1,1-Trichloroethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:06	MFF
1,1,2-Trichloroethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:06	MFF
Trichloroethylene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:06	MFF
Trichlorofluoromethane (Freon 11)	ND	0.010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:06	MFF
1,2,3-Trichloropropane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:06	MFF
1,2,4-Trimethylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:06	MFF
1,3,5-Trimethylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:06	MFF
Vinyl Chloride	ND	0.010	mg/Kg dry	1	L-04	SW-846 8260C	3/13/19	3/14/19 9:06	MFF
m+p Xylene	ND	0.0042	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:06	MFF
o-Xylene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:06	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	103	70-130	
Toluene-d8	94.2	70-130	
4-Bromofluorobenzene	96.9	70-130	

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-D3 (10-15)

Sampled: 3/12/2019 08:30

Sample ID: 19C0480-05

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatle Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.37	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 11:02	IMR
Acenaphthylene	ND	0.37	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 11:02	IMR
Acetophenone	ND	0.74	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 11:02	IMR
Aniline	ND	0.74	mg/Kg dry	1	L-04, V-34	SW-846 8270D	3/15/19	3/19/19 11:02	IMR
Anthracene	0.56	0.37	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 11:02	IMR
Benzo(a)anthracene	1.8	0.37	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 11:02	IMR
Benzo(a)pyrene	1.8	0.37	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 11:02	IMR
Benzo(b)fluoranthene	2.2	0.37	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 11:02	IMR
Benzo(g,h,i)perylene	0.83	0.37	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 11:02	IMR
Benzo(k)fluoranthene	0.85	0.37	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 11:02	IMR
Bis(2-chloroethoxy)methane	ND	0.74	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 11:02	IMR
Bis(2-chloroethyl)ether	ND	0.74	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 11:02	IMR
Bis(2-chloroisopropyl)ether	ND	0.74	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 11:02	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.74	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 11:02	IMR
4-Bromophenylphenylether	ND	0.74	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 11:02	IMR
Butylbenzylphthalate	ND	0.74	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 11:02	IMR
4-Chloroaniline	ND	1.4	mg/Kg dry	1	V-34	SW-846 8270D	3/15/19	3/19/19 11:02	IMR
2-Chloronaphthalene	ND	0.74	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 11:02	IMR
2-Chlorophenol	ND	0.74	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 11:02	IMR
Chrysene	1.8	0.37	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 11:02	IMR
Dibenz(a,h)anthracene	ND	0.37	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 11:02	IMR
Dibenzofuran	ND	0.74	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 11:02	IMR
Di-n-butylphthalate	ND	0.74	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 11:02	IMR
1,2-Dichlorobenzene	ND	0.74	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 11:02	IMR
1,3-Dichlorobenzene	ND	0.74	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 11:02	IMR
1,4-Dichlorobenzene	ND	0.74	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 11:02	IMR
3,3-Dichlorobenzidine	ND	0.37	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 11:02	IMR
2,4-Dichlorophenol	ND	0.74	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 11:02	IMR
Diethylphthalate	ND	0.74	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 11:02	IMR
2,4-Dimethylphenol	ND	0.74	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 11:02	IMR
Dimethylphthalate	ND	0.74	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 11:02	IMR
2,4-Dinitrophenol	ND	1.4	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 11:02	IMR
2,4-Dinitrotoluene	ND	0.74	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 11:02	IMR
2,6-Dinitrotoluene	ND	0.74	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 11:02	IMR
Di-n-octylphthalate	ND	0.74	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 11:02	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.74	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 11:02	IMR
Fluoranthene	3.3	0.37	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 11:02	IMR
Fluorene	0.38	0.37	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 11:02	IMR
Hexachlorobenzene	ND	0.74	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 11:02	IMR
Hexachlorobutadiene	ND	0.74	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 11:02	IMR
Hexachloroethane	ND	0.74	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 11:02	IMR
Indeno(1,2,3-cd)pyrene	0.93	0.37	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 11:02	IMR
Isophorone	ND	0.74	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 11:02	IMR
2-Methylnaphthalene	ND	0.37	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 11:02	IMR

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-D3 (10-15)

Sampled: 3/12/2019 08:30

Sample ID: 19C0480-05

Sample Matrix: Soil

Sample Flags: RL-08

**Semivolatile Organic Compounds by GC/MS**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	0.74	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 11:02	IMR
3/4-Methylphenol	ND	0.74	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 11:02	IMR
Naphthalene	ND	0.37	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 11:02	IMR
Nitrobenzene	ND	0.74	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 11:02	IMR
2-Nitrophenol	ND	0.74	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 11:02	IMR
4-Nitrophenol	ND	1.4	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 11:02	IMR
Pentachlorophenol	ND	0.74	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 11:02	IMR
Phenanthrene	2.4	0.37	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 11:02	IMR
Phenol	ND	0.74	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 11:02	IMR
Pyrene	3.8	0.37	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 11:02	IMR
1,2,4-Trichlorobenzene	ND	0.74	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 11:02	IMR
2,4,5-Trichlorophenol	ND	0.74	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 11:02	IMR
2,4,6-Trichlorophenol	ND	0.74	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 11:02	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	81.9	30-130	
Phenol-d6	81.9	30-130	
Nitrobenzene-d5	82.1	30-130	
2-Fluorobiphenyl	88.4	30-130	
2,4,6-Tribromophenol	89.4	30-130	
p-Terphenyl-d14	101	30-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-D3 (10-15)

Sampled: 3/12/2019 08:30

Sample ID: 19C0480-05

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.088	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 15:07	JMB
Aroclor-1221 [1]	ND	0.088	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 15:07	JMB
Aroclor-1232 [1]	ND	0.088	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 15:07	JMB
Aroclor-1242 [1]	ND	0.088	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 15:07	JMB
Aroclor-1248 [1]	ND	0.088	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 15:07	JMB
Aroclor-1254 [1]	ND	0.088	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 15:07	JMB
Aroclor-1260 [1]	ND	0.088	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 15:07	JMB
Aroclor-1262 [1]	ND	0.088	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 15:07	JMB
Aroclor-1268 [1]	ND	0.088	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 15:07	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		68.7	30-150					3/18/19 15:07	
Decachlorobiphenyl [2]		76.7	30-150					3/18/19 15:07	
Tetrachloro-m-xylene [1]		85.9	30-150					3/18/19 15:07	
Tetrachloro-m-xylene [2]		85.4	30-150					3/18/19 15:07	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-D3 (10-15)

Sampled: 3/12/2019 08:30

Sample ID: 19C0480-05

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	1200	360	mg/Kg dry	20		SW-846 8100 Modified	3/15/19	3/19/19 10:20	RMW
<b>Surrogates</b>		<b>% Recovery</b>	<b>Recovery Limits</b>		<b>Flag/Qual</b>				
2-Fluorobiphenyl		*	40-140		S-01			3/19/19 10:20	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-D3 (10-15)

Sampled: 3/12/2019 08:30

Sample ID: 19C0480-05

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.8	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 12:59	QNW
Arsenic	5.7	1.8	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 12:59	QNW
Barium	29	1.8	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 12:59	QNW
Beryllium	0.33	0.18	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 12:59	QNW
Cadmium	0.35	0.18	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 12:59	QNW
Chromium	15	0.37	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 12:59	QNW
Lead	46	0.55	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 12:59	QNW
Mercury	0.031	0.026	mg/Kg dry	1		SW-846 7471B	3/13/19	3/14/19 16:14	TBC
Nickel	13	0.37	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 12:59	QNW
Selenium	ND	3.7	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 12:59	QNW
Silver	ND	0.37	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 12:59	QNW
Thallium	ND	1.8	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 12:59	QNW
Vanadium	26	0.74	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 12:59	QNW
Zinc	49	0.74	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 12:59	QNW



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-D3 (10-15)

Sampled: 3/12/2019 08:30

Sample ID: 19C0480-05

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	90.7		% Wt	1		SM 2540G	3/18/19	3/18/19 19:44	KMG
Ignitability	Absent		present/absent	1		SW-846 1030	3/14/19	3/14/19 11:10	KMV
pH @20.3°C	8.2		pH Units	1		SW-846 9045C	3/12/19	3/12/19 19:57	AIA
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	3/14/19	3/15/19 11:07	KMV
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	3/14/19	3/15/19 10:28	KMV
Specific conductance	22	2.0	µmhos/cm	1		SM21-22 2510B Modified	3/14/19	3/14/19 12:49	EC

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-E3 (0-5)

Sampled: 3/12/2019 09:00

Sample ID: 19C0480-06

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.077	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:31	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00077	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:31	MFF
Benzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:31	MFF
Bromobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:31	MFF
Bromochloromethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:31	MFF
Bromodichloromethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:31	MFF
Bromoform	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:31	MFF
Bromomethane	ND	0.0077	mg/Kg dry	1	V-34	SW-846 8260C	3/13/19	3/14/19 9:31	MFF
2-Butanone (MEK)	ND	0.031	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:31	MFF
n-Butylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:31	MFF
sec-Butylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:31	MFF
tert-Butylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:31	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00077	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:31	MFF
Carbon Disulfide	ND	0.0046	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:31	MFF
Carbon Tetrachloride	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:31	MFF
Chlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:31	MFF
Chlorodibromomethane	ND	0.00077	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:31	MFF
Chloroethane	ND	0.0077	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:31	MFF
Chloroform	ND	0.0031	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:31	MFF
Chloromethane	ND	0.0077	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:31	MFF
2-Chlorotoluene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:31	MFF
4-Chlorotoluene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:31	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:31	MFF
1,2-Dibromoethane (EDB)	ND	0.00077	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:31	MFF
Dibromomethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:31	MFF
1,2-Dichlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:31	MFF
1,3-Dichlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:31	MFF
1,4-Dichlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:31	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0077	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:31	MFF
1,1-Dichloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:31	MFF
1,2-Dichloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:31	MFF
1,1-Dichloroethylene	ND	0.0031	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:31	MFF
cis-1,2-Dichloroethylene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:31	MFF
trans-1,2-Dichloroethylene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:31	MFF
1,2-Dichloropropane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:31	MFF
1,3-Dichloropropane	ND	0.00077	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:31	MFF
2,2-Dichloropropane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:31	MFF
1,1-Dichloropropene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:31	MFF
cis-1,3-Dichloropropene	ND	0.00077	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:31	MFF
trans-1,3-Dichloropropene	ND	0.00077	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:31	MFF
Diethyl Ether	ND	0.0077	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:31	MFF
Diisopropyl Ether (DIPE)	ND	0.00077	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:31	MFF
1,4-Dioxane	ND	0.077	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:31	MFF
Ethylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:31	MFF

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-E3 (0-5)

Sampled: 3/12/2019 09:00

Sample ID: 19C0480-06

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:31	MFF
2-Hexanone (MBK)	ND	0.015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:31	MFF
Isopropylbenzene (Cumene)	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:31	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:31	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0031	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:31	MFF
Methylene Chloride	ND	0.0077	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:31	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:31	MFF
Naphthalene	ND	0.0031	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:31	MFF
n-Propylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:31	MFF
Styrene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:31	MFF
1,1,1,2-Tetrachloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:31	MFF
1,1,2,2-Tetrachloroethane	ND	0.00077	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:31	MFF
Tetrachloroethylene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:31	MFF
Tetrahydrofuran	ND	0.0077	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:31	MFF
Toluene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:31	MFF
1,2,3-Trichlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:31	MFF
1,2,4-Trichlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:31	MFF
1,1,1-Trichloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:31	MFF
1,1,2-Trichloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:31	MFF
Trichloroethylene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:31	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0077	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:31	MFF
1,2,3-Trichloropropane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:31	MFF
1,2,4-Trimethylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:31	MFF
1,3,5-Trimethylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:31	MFF
Vinyl Chloride	ND	0.0077	mg/Kg dry	1	L-04	SW-846 8260C	3/13/19	3/14/19 9:31	MFF
m+p Xylene	ND	0.0031	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:31	MFF
o-Xylene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:31	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	99.4	70-130	
Toluene-d8	94.7	70-130	
4-Bromofluorobenzene	95.9	70-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-E3 (0-5)

Sampled: 3/12/2019 09:00

Sample ID: 19C0480-06

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.37	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:24	IMR
Acenaphthylene	ND	0.37	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:24	IMR
Acetophenone	ND	0.75	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:24	IMR
Aniline	ND	0.75	mg/Kg dry	1	L-04, V-34	SW-846 8270D	3/15/19	3/19/19 12:24	IMR
Anthracene	ND	0.37	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:24	IMR
Benzo(a)anthracene	0.42	0.37	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:24	IMR
Benzo(a)pyrene	0.56	0.37	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:24	IMR
Benzo(b)fluoranthene	0.67	0.37	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:24	IMR
Benzo(g,h,i)perylene	ND	0.37	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:24	IMR
Benzo(k)fluoranthene	ND	0.37	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:24	IMR
Bis(2-chloroethoxy)methane	ND	0.75	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:24	IMR
Bis(2-chloroethyl)ether	ND	0.75	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:24	IMR
Bis(2-chloroisopropyl)ether	ND	0.75	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:24	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.75	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:24	IMR
4-Bromophenylphenylether	ND	0.75	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:24	IMR
Butylbenzylphthalate	ND	0.75	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:24	IMR
4-Chloroaniline	ND	1.4	mg/Kg dry	1	V-34	SW-846 8270D	3/15/19	3/19/19 12:24	IMR
2-Chloronaphthalene	ND	0.75	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:24	IMR
2-Chlorophenol	ND	0.75	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:24	IMR
Chrysene	0.48	0.37	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:24	IMR
Dibenz(a,h)anthracene	ND	0.37	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:24	IMR
Dibenzofuran	ND	0.75	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:24	IMR
Di-n-butylphthalate	ND	0.75	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:24	IMR
1,2-Dichlorobenzene	ND	0.75	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:24	IMR
1,3-Dichlorobenzene	ND	0.75	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:24	IMR
1,4-Dichlorobenzene	ND	0.75	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:24	IMR
3,3-Dichlorobenzidine	ND	0.37	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:24	IMR
2,4-Dichlorophenol	ND	0.75	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:24	IMR
Diethylphthalate	ND	0.75	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:24	IMR
2,4-Dimethylphenol	ND	0.75	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:24	IMR
Dimethylphthalate	ND	0.75	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:24	IMR
2,4-Dinitrophenol	ND	1.4	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:24	IMR
2,4-Dinitrotoluene	ND	0.75	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:24	IMR
2,6-Dinitrotoluene	ND	0.75	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:24	IMR
Di-n-octylphthalate	ND	0.75	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:24	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.75	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:24	IMR
Fluoranthene	0.70	0.37	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:24	IMR
Fluorene	ND	0.37	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:24	IMR
Hexachlorobenzene	ND	0.75	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:24	IMR
Hexachlorobutadiene	ND	0.75	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:24	IMR
Hexachloroethane	ND	0.75	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:24	IMR
Indeno(1,2,3-cd)pyrene	ND	0.37	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:24	IMR
Isophorone	ND	0.75	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:24	IMR
2-Methylnaphthalene	ND	0.37	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:24	IMR

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-E3 (0-5)

Sampled: 3/12/2019 09:00

Sample ID: 19C0480-06

Sample Matrix: Soil

Sample Flags: RL-08

**Semivolatile Organic Compounds by GC/MS**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	0.75	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:24	IMR
3/4-Methylphenol	ND	0.75	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:24	IMR
Naphthalene	ND	0.37	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:24	IMR
Nitrobenzene	ND	0.75	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:24	IMR
2-Nitrophenol	ND	0.75	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:24	IMR
4-Nitrophenol	ND	1.4	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:24	IMR
Pentachlorophenol	ND	0.75	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:24	IMR
Phenanthrene	ND	0.37	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:24	IMR
Phenol	ND	0.75	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:24	IMR
Pyrene	0.81	0.37	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:24	IMR
1,2,4-Trichlorobenzene	ND	0.75	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:24	IMR
2,4,5-Trichlorophenol	ND	0.75	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:24	IMR
2,4,6-Trichlorophenol	ND	0.75	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:24	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	90.4	30-130	
Phenol-d6	88.7	30-130	
Nitrobenzene-d5	90.6	30-130	
2-Fluorobiphenyl	94.9	30-130	
2,4,6-Tribromophenol	98.4	30-130	
p-Terphenyl-d14	105	30-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-E3 (0-5)

Sampled: 3/12/2019 09:00

Sample ID: 19C0480-06

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 15:25	JMB
Aroclor-1221 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 15:25	JMB
Aroclor-1232 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 15:25	JMB
Aroclor-1242 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 15:25	JMB
Aroclor-1248 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 15:25	JMB
Aroclor-1254 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 15:25	JMB
Aroclor-1260 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 15:25	JMB
Aroclor-1262 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 15:25	JMB
Aroclor-1268 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 15:25	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		76.2	30-150					3/18/19 15:25	
Decachlorobiphenyl [2]		82.2	30-150					3/18/19 15:25	
Tetrachloro-m-xylene [1]		97.9	30-150					3/18/19 15:25	
Tetrachloro-m-xylene [2]		96.1	30-150					3/18/19 15:25	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Sampled: 3/12/2019 09:00

Field Sample #: TP-E3 (0-5)

Sample ID: 19C0480-06

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	780	180	mg/Kg dry	10		SW-846 8100 Modified	3/15/19	3/19/19 13:10	RMW
<b>Surrogates</b>		<b>% Recovery</b>	<b>Recovery Limits</b>		<b>Flag/Qual</b>				
2-Fluorobiphenyl		60.8	40-140					3/19/19 13:10	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-E3 (0-5)

Sampled: 3/12/2019 09:00

Sample ID: 19C0480-06

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.8	mg/Kg dry	1	MS-07	SW-846 6010D	3/13/19	3/15/19 12:23	QNW
Arsenic	5.2	1.8	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 12:23	QNW
Barium	33	1.8	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 12:23	QNW
Beryllium	0.38	0.18	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 12:23	QNW
Cadmium	0.34	0.18	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 12:23	QNW
Chromium	17	0.36	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 12:23	QNW
Lead	25	0.55	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 12:23	QNW
Mercury	0.031	0.028	mg/Kg dry	1		SW-846 7471B	3/13/19	3/14/19 16:15	TBC
Nickel	14	0.36	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 12:23	QNW
Selenium	ND	3.6	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 12:23	QNW
Silver	ND	0.36	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 12:23	QNW
Thallium	ND	1.8	mg/Kg dry	1	MS-14	SW-846 6010D	3/13/19	3/15/19 12:23	QNW
Vanadium	25	0.73	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 12:23	QNW
Zinc	44	0.73	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 12:23	QNW



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-E3 (0-5)

Sampled: 3/12/2019 09:00

Sample ID: 19C0480-06

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	90.3		% Wt	1		SM 2540G	3/18/19	3/18/19 19:44	KMG
Ignitability	Absent		present/absent	1		SW-846 1030	3/14/19	3/14/19 11:10	KMV
pH @21.1°C	8.2		pH Units	1		SW-846 9045C	3/12/19	3/12/19 19:57	AIA
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	3/14/19	3/15/19 11:07	KMV
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	3/14/19	3/15/19 10:28	KMV
Specific conductance	13	2.0	µmhos/cm	1		SM21-22 2510B Modified	3/14/19	3/14/19 12:49	EC

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-E3 (5-10)

Sampled: 3/12/2019 09:05

Sample ID: 19C0480-07

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.11	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:55	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.0011	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:55	MFF
Benzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:55	MFF
Bromobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:55	MFF
Bromochloromethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:55	MFF
Bromodichloromethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:55	MFF
Bromoform	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:55	MFF
Bromomethane	ND	0.011	mg/Kg dry	1	V-34	SW-846 8260C	3/13/19	3/14/19 9:55	MFF
2-Butanone (MEK)	ND	0.043	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:55	MFF
n-Butylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:55	MFF
sec-Butylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:55	MFF
tert-Butylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:55	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.0011	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:55	MFF
Carbon Disulfide	ND	0.0064	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:55	MFF
Carbon Tetrachloride	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:55	MFF
Chlorobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:55	MFF
Chlorodibromomethane	ND	0.0011	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:55	MFF
Chloroethane	ND	0.011	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:55	MFF
Chloroform	ND	0.0043	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:55	MFF
Chloromethane	ND	0.011	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:55	MFF
2-Chlorotoluene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:55	MFF
4-Chlorotoluene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:55	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:55	MFF
1,2-Dibromoethane (EDB)	ND	0.0011	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:55	MFF
Dibromomethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:55	MFF
1,2-Dichlorobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:55	MFF
1,3-Dichlorobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:55	MFF
1,4-Dichlorobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:55	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.011	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:55	MFF
1,1-Dichloroethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:55	MFF
1,2-Dichloroethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:55	MFF
1,1-Dichloroethylene	ND	0.0043	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:55	MFF
cis-1,2-Dichloroethylene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:55	MFF
trans-1,2-Dichloroethylene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:55	MFF
1,2-Dichloropropane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:55	MFF
1,3-Dichloropropane	ND	0.0011	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:55	MFF
2,2-Dichloropropane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:55	MFF
1,1-Dichloropropene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:55	MFF
cis-1,3-Dichloropropene	ND	0.0011	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:55	MFF
trans-1,3-Dichloropropene	ND	0.0011	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:55	MFF
Diethyl Ether	ND	0.011	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:55	MFF
Diisopropyl Ether (DIPE)	ND	0.0011	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:55	MFF
1,4-Dioxane	ND	0.11	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:55	MFF
Ethylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:55	MFF

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-E3 (5-10)

Sampled: 3/12/2019 09:05

Sample ID: 19C0480-07

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:55	MFF
2-Hexanone (MBK)	ND	0.021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:55	MFF
Isopropylbenzene (Cumene)	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:55	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:55	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0043	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:55	MFF
Methylene Chloride	ND	0.011	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:55	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:55	MFF
Naphthalene	ND	0.0043	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:55	MFF
n-Propylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:55	MFF
Styrene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:55	MFF
1,1,1,2-Tetrachloroethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:55	MFF
1,1,2,2-Tetrachloroethane	ND	0.0011	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:55	MFF
Tetrachloroethylene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:55	MFF
Tetrahydrofuran	ND	0.011	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:55	MFF
Toluene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:55	MFF
1,2,3-Trichlorobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:55	MFF
1,2,4-Trichlorobenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:55	MFF
1,1,1-Trichloroethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:55	MFF
1,1,2-Trichloroethane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:55	MFF
Trichloroethylene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:55	MFF
Trichlorofluoromethane (Freon 11)	ND	0.011	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:55	MFF
1,2,3-Trichloropropane	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:55	MFF
1,2,4-Trimethylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:55	MFF
1,3,5-Trimethylbenzene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:55	MFF
Vinyl Chloride	ND	0.011	mg/Kg dry	1	L-04	SW-846 8260C	3/13/19	3/14/19 9:55	MFF
m+p Xylene	ND	0.0043	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:55	MFF
o-Xylene	ND	0.0021	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 9:55	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	103	70-130	
Toluene-d8	94.1	70-130	
4-Bromofluorobenzene	96.5	70-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-E3 (5-10)

Sampled: 3/12/2019 09:05

Sample ID: 19C0480-07

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatiles Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.40	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:51	IMR
Acenaphthylene	ND	0.40	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:51	IMR
Acetophenone	ND	0.80	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:51	IMR
Aniline	ND	0.80	mg/Kg dry	1	L-04, V-34	SW-846 8270D	3/15/19	3/19/19 12:51	IMR
Anthracene	1.2	0.40	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:51	IMR
Benzo(a)anthracene	3.4	0.40	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:51	IMR
Benzo(a)pyrene	3.1	0.40	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:51	IMR
Benzo(b)fluoranthene	3.6	0.40	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:51	IMR
Benzo(g,h,i)perylene	1.5	0.40	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:51	IMR
Benzo(k)fluoranthene	1.4	0.40	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:51	IMR
Bis(2-chloroethoxy)methane	ND	0.80	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:51	IMR
Bis(2-chloroethyl)ether	ND	0.80	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:51	IMR
Bis(2-chloroisopropyl)ether	ND	0.80	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:51	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.80	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:51	IMR
4-Bromophenylphenylether	ND	0.80	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:51	IMR
Butylbenzylphthalate	ND	0.80	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:51	IMR
4-Chloroaniline	ND	1.6	mg/Kg dry	1	V-34	SW-846 8270D	3/15/19	3/19/19 12:51	IMR
2-Chloronaphthalene	ND	0.80	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:51	IMR
2-Chlorophenol	ND	0.80	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:51	IMR
Chrysene	3.3	0.40	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:51	IMR
Dibenz(a,h)anthracene	ND	0.40	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:51	IMR
Dibenzofuran	ND	0.80	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:51	IMR
Di-n-butylphthalate	ND	0.80	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:51	IMR
1,2-Dichlorobenzene	ND	0.80	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:51	IMR
1,3-Dichlorobenzene	ND	0.80	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:51	IMR
1,4-Dichlorobenzene	ND	0.80	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:51	IMR
3,3-Dichlorobenzidine	ND	0.40	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:51	IMR
2,4-Dichlorophenol	ND	0.80	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:51	IMR
Diethylphthalate	ND	0.80	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:51	IMR
2,4-Dimethylphenol	ND	0.80	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:51	IMR
Dimethylphthalate	ND	0.80	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:51	IMR
2,4-Dinitrophenol	ND	1.6	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:51	IMR
2,4-Dinitrotoluene	ND	0.80	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:51	IMR
2,6-Dinitrotoluene	ND	0.80	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:51	IMR
Di-n-octylphthalate	ND	0.80	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:51	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.80	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:51	IMR
Fluoranthene	6.6	0.40	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:51	IMR
Fluorene	ND	0.40	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:51	IMR
Hexachlorobenzene	ND	0.80	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:51	IMR
Hexachlorobutadiene	ND	0.80	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:51	IMR
Hexachloroethane	ND	0.80	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:51	IMR
Indeno(1,2,3-cd)pyrene	1.7	0.40	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:51	IMR
Isophorone	ND	0.80	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:51	IMR
2-Methylnaphthalene	ND	0.40	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:51	IMR

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-E3 (5-10)

Sampled: 3/12/2019 09:05

Sample ID: 19C0480-07

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	0.80	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:51	IMR
3/4-Methylphenol	ND	0.80	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:51	IMR
Naphthalene	ND	0.40	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:51	IMR
Nitrobenzene	ND	0.80	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:51	IMR
2-Nitrophenol	ND	0.80	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:51	IMR
4-Nitrophenol	ND	1.6	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:51	IMR
Pentachlorophenol	ND	0.80	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:51	IMR
Phenanthrene	4.2	0.40	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:51	IMR
Phenol	ND	0.80	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:51	IMR
Pyrene	7.5	0.40	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:51	IMR
1,2,4-Trichlorobenzene	ND	0.80	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:51	IMR
2,4,5-Trichlorophenol	ND	0.80	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:51	IMR
2,4,6-Trichlorophenol	ND	0.80	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 12:51	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	83.4	30-130	
Phenol-d6	83.8	30-130	
Nitrobenzene-d5	82.7	30-130	
2-Fluorobiphenyl	89.0	30-130	
2,4,6-Tribromophenol	95.1	30-130	
p-Terphenyl-d14	108	30-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-E3 (5-10)

Sampled: 3/12/2019 09:05

Sample ID: 19C0480-07

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.096	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 15:42	JMB
Aroclor-1221 [1]	ND	0.096	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 15:42	JMB
Aroclor-1232 [1]	ND	0.096	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 15:42	JMB
Aroclor-1242 [1]	ND	0.096	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 15:42	JMB
Aroclor-1248 [1]	ND	0.096	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 15:42	JMB
Aroclor-1254 [1]	ND	0.096	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 15:42	JMB
Aroclor-1260 [1]	ND	0.096	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 15:42	JMB
Aroclor-1262 [1]	ND	0.096	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 15:42	JMB
Aroclor-1268 [1]	ND	0.096	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 15:42	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		75.9	30-150					3/18/19 15:42	
Decachlorobiphenyl [2]		83.1	30-150					3/18/19 15:42	
Tetrachloro-m-xylene [1]		96.1	30-150					3/18/19 15:42	
Tetrachloro-m-xylene [2]		93.1	30-150					3/18/19 15:42	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-E3 (5-10)

Sampled: 3/12/2019 09:05

Sample ID: 19C0480-07

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	1100	390	mg/Kg dry	20		SW-846 8100 Modified	3/15/19	3/19/19 11:00	RMW
<b>Surrogates</b>		<b>% Recovery</b>	<b>Recovery Limits</b>		<b>Flag/Qual</b>				
2-Fluorobiphenyl		*	40-140		S-01			3/19/19 11:00	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-E3 (5-10)

Sampled: 3/12/2019 09:05

Sample ID: 19C0480-07

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	2.0	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:04	QNW
Arsenic	5.3	2.0	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:04	QNW
Barium	42	2.0	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:04	QNW
Beryllium	0.42	0.20	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:04	QNW
Cadmium	0.40	0.20	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:04	QNW
Chromium	18	0.40	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:04	QNW
Lead	53	0.60	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:04	QNW
Mercury	0.072	0.030	mg/Kg dry	1		SW-846 7471B	3/13/19	3/14/19 16:17	TBC
Nickel	14	0.40	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:04	QNW
Selenium	ND	4.0	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:04	QNW
Silver	ND	0.40	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:04	QNW
Thallium	ND	2.0	mg/Kg dry	1	MS-14	SW-846 6010D	3/13/19	3/15/19 13:04	QNW
Vanadium	27	0.80	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:04	QNW
Zinc	59	0.80	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:04	QNW



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-E3 (5-10)

Sampled: 3/12/2019 09:05

Sample ID: 19C0480-07

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	83.4		% Wt	1		SM 2540G	3/18/19	3/18/19 19:44	KMG
Ignitability	Absent		present/absent	1		SW-846 1030	3/14/19	3/14/19 11:10	KMV
pH @20.1°C	8.1		pH Units	1		SW-846 9045C	3/12/19	3/12/19 19:57	AIA
Reactive Cyanide	ND	4.0	mg/Kg	1		SW-846 9014	3/14/19	3/15/19 11:07	KMV
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	3/14/19	3/15/19 10:28	KMV
Specific conductance	19	2.0	µmhos/cm	1		SM21-22 2510B Modified	3/14/19	3/14/19 12:49	EC

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-F3 (0-5)

Sampled: 3/12/2019 09:20

Sample ID: 19C0480-08

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.086	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:20	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00086	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:20	MFF
Benzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:20	MFF
Bromobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:20	MFF
Bromochloromethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:20	MFF
Bromodichloromethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:20	MFF
Bromoform	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:20	MFF
Bromomethane	ND	0.0086	mg/Kg dry	1	V-34	SW-846 8260C	3/13/19	3/14/19 10:20	MFF
2-Butanone (MEK)	ND	0.034	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:20	MFF
n-Butylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:20	MFF
sec-Butylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:20	MFF
tert-Butylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:20	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00086	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:20	MFF
Carbon Disulfide	ND	0.0052	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:20	MFF
Carbon Tetrachloride	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:20	MFF
Chlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:20	MFF
Chlorodibromomethane	ND	0.00086	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:20	MFF
Chloroethane	ND	0.0086	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:20	MFF
Chloroform	ND	0.0034	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:20	MFF
Chloromethane	ND	0.0086	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:20	MFF
2-Chlorotoluene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:20	MFF
4-Chlorotoluene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:20	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:20	MFF
1,2-Dibromoethane (EDB)	ND	0.00086	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:20	MFF
Dibromomethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:20	MFF
1,2-Dichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:20	MFF
1,3-Dichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:20	MFF
1,4-Dichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:20	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0086	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:20	MFF
1,1-Dichloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:20	MFF
1,2-Dichloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:20	MFF
1,1-Dichloroethylene	ND	0.0034	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:20	MFF
cis-1,2-Dichloroethylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:20	MFF
trans-1,2-Dichloroethylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:20	MFF
1,2-Dichloropropane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:20	MFF
1,3-Dichloropropane	ND	0.00086	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:20	MFF
2,2-Dichloropropane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:20	MFF
1,1-Dichloropropene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:20	MFF
cis-1,3-Dichloropropene	ND	0.00086	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:20	MFF
trans-1,3-Dichloropropene	ND	0.00086	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:20	MFF
Diethyl Ether	ND	0.0086	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:20	MFF
Diisopropyl Ether (DIPE)	ND	0.00086	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:20	MFF
1,4-Dioxane	ND	0.086	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:20	MFF
Ethylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:20	MFF

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-F3 (0-5)

Sampled: 3/12/2019 09:20

Sample ID: 19C0480-08

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:20	MFF
2-Hexanone (MBK)	ND	0.017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:20	MFF
Isopropylbenzene (Cumene)	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:20	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:20	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0034	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:20	MFF
Methylene Chloride	ND	0.0086	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:20	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:20	MFF
Naphthalene	ND	0.0034	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:20	MFF
n-Propylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:20	MFF
Styrene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:20	MFF
1,1,1,2-Tetrachloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:20	MFF
1,1,2,2-Tetrachloroethane	ND	0.00086	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:20	MFF
Tetrachloroethylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:20	MFF
Tetrahydrofuran	ND	0.0086	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:20	MFF
Toluene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:20	MFF
1,2,3-Trichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:20	MFF
1,2,4-Trichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:20	MFF
1,1,1-Trichloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:20	MFF
1,1,2-Trichloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:20	MFF
Trichloroethylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:20	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0086	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:20	MFF
1,2,3-Trichloropropane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:20	MFF
1,2,4-Trimethylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:20	MFF
1,3,5-Trimethylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:20	MFF
Vinyl Chloride	ND	0.0086	mg/Kg dry	1	L-04	SW-846 8260C	3/13/19	3/14/19 10:20	MFF
m+p Xylene	ND	0.0034	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:20	MFF
o-Xylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:20	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	99.5	70-130	
Toluene-d8	94.6	70-130	
4-Bromofluorobenzene	95.6	70-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-F3 (0-5)

Sampled: 3/12/2019 09:20

Sample ID: 19C0480-08

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatiles Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:37	BGL
Acenaphthylene	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:37	BGL
Acetophenone	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:37	BGL
Aniline	ND	1.5	mg/Kg dry	2	L-04, V-34	SW-846 8270D	3/15/19	3/20/19 10:37	BGL
Anthracene	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:37	BGL
Benzo(a)anthracene	1.5	0.76	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:37	BGL
Benzo(a)pyrene	1.6	0.76	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:37	BGL
Benzo(b)fluoranthene	1.8	0.76	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:37	BGL
Benzo(g,h,i)perylene	0.93	0.76	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:37	BGL
Benzo(k)fluoranthene	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:37	BGL
Bis(2-chloroethoxy)methane	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:37	BGL
Bis(2-chloroethyl)ether	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:37	BGL
Bis(2-chloroisopropyl)ether	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:37	BGL
Bis(2-Ethylhexyl)phthalate	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:37	BGL
4-Bromophenylphenylether	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:37	BGL
Butylbenzylphthalate	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:37	BGL
4-Chloroaniline	ND	2.9	mg/Kg dry	2	V-34	SW-846 8270D	3/15/19	3/20/19 10:37	BGL
2-Chloronaphthalene	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:37	BGL
2-Chlorophenol	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:37	BGL
Chrysene	1.5	0.76	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:37	BGL
Dibenz(a,h)anthracene	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:37	BGL
Dibenzofuran	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:37	BGL
Di-n-butylphthalate	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:37	BGL
1,2-Dichlorobenzene	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:37	BGL
1,3-Dichlorobenzene	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:37	BGL
1,4-Dichlorobenzene	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:37	BGL
3,3-Dichlorobenzidine	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:37	BGL
2,4-Dichlorophenol	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:37	BGL
Diethylphthalate	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:37	BGL
2,4-Dimethylphenol	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:37	BGL
Dimethylphthalate	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:37	BGL
2,4-Dinitrophenol	ND	2.9	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:37	BGL
2,4-Dinitrotoluene	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:37	BGL
2,6-Dinitrotoluene	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:37	BGL
Di-n-octylphthalate	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:37	BGL
1,2-Diphenylhydrazine/Azobenzene	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:37	BGL
Fluoranthene	2.9	0.76	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:37	BGL
Fluorene	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:37	BGL
Hexachlorobenzene	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:37	BGL
Hexachlorobutadiene	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:37	BGL
Hexachloroethane	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:37	BGL
Indeno(1,2,3-cd)pyrene	0.95	0.76	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:37	BGL
Isophorone	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:37	BGL
2-Methylnaphthalene	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:37	BGL

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-F3 (0-5)

Sampled: 3/12/2019 09:20

Sample ID: 19C0480-08

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:37	BGL
3/4-Methylphenol	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:37	BGL
Naphthalene	ND	0.76	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:37	BGL
Nitrobenzene	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:37	BGL
2-Nitrophenol	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:37	BGL
4-Nitrophenol	ND	2.9	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:37	BGL
Pentachlorophenol	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:37	BGL
Phenanthrene	1.5	0.76	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:37	BGL
Phenol	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:37	BGL
Pyrene	3.0	0.76	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:37	BGL
1,2,4-Trichlorobenzene	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:37	BGL
2,4,5-Trichlorophenol	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:37	BGL
2,4,6-Trichlorophenol	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:37	BGL

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	83.3	30-130	
Phenol-d6	84.4	30-130	
Nitrobenzene-d5	84.0	30-130	
2-Fluorobiphenyl	90.9	30-130	
2,4,6-Tribromophenol	94.8	30-130	
p-Terphenyl-d14	103	30-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-F3 (0-5)

Sampled: 3/12/2019 09:20

Sample ID: 19C0480-08

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 16:00	JMB
Aroclor-1221 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 16:00	JMB
Aroclor-1232 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 16:00	JMB
Aroclor-1242 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 16:00	JMB
Aroclor-1248 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 16:00	JMB
Aroclor-1254 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 16:00	JMB
Aroclor-1260 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 16:00	JMB
Aroclor-1262 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 16:00	JMB
Aroclor-1268 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 16:00	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		70.5	30-150					3/18/19 16:00	
Decachlorobiphenyl [2]		77.0	30-150					3/18/19 16:00	
Tetrachloro-m-xylene [1]		91.9	30-150					3/18/19 16:00	
Tetrachloro-m-xylene [2]		89.9	30-150					3/18/19 16:00	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-F3 (0-5)

Sampled: 3/12/2019 09:20

Sample ID: 19C0480-08

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	1300	370	mg/Kg dry	20		SW-846 8100 Modified	3/15/19	3/19/19 11:20	RMW
<b>Surrogates</b>		<b>% Recovery</b>	<b>Recovery Limits</b>		<b>Flag/Qual</b>				
2-Fluorobiphenyl		*	40-140		S-01			3/19/19 11:20	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-F3 (0-5)

Sampled: 3/12/2019 09:20

Sample ID: 19C0480-08

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:08	QNW
Arsenic	4.0	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:08	QNW
Barium	32	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:08	QNW
Beryllium	0.35	0.19	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:08	QNW
Cadmium	0.34	0.19	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:08	QNW
Chromium	17	0.37	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:08	QNW
Lead	39	0.56	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:08	QNW
Mercury	0.045	0.026	mg/Kg dry	1		SW-846 7471B	3/13/19	3/14/19 16:19	TBC
Nickel	14	0.37	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:08	QNW
Selenium	ND	3.7	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:08	QNW
Silver	ND	0.37	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:08	QNW
Thallium	ND	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:08	QNW
Vanadium	26	0.74	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:08	QNW
Zinc	47	0.74	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:08	QNW



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-F3 (0-5)

Sampled: 3/12/2019 09:20

Sample ID: 19C0480-08

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	88.8		% Wt	1		SM 2540G	3/18/19	3/18/19 19:44	KMG
Ignitability	Absent		present/absent	1		SW-846 1030	3/14/19	3/14/19 11:10	KMV
pH @20.2°C	7.7		pH Units	1		SW-846 9045C	3/12/19	3/12/19 19:57	AIA
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	3/14/19	3/15/19 11:07	KMV
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	3/14/19	3/15/19 10:28	KMV
Specific conductance	17	2.0	µmhos/cm	1		SM21-22 2510B Modified	3/14/19	3/14/19 12:49	EC

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-F3 (5-10)

Sampled: 3/12/2019 09:25

Sample ID: 19C0480-09

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.096	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:44	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00096	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:44	MFF
Benzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:44	MFF
Bromobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:44	MFF
Bromochloromethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:44	MFF
Bromodichloromethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:44	MFF
Bromoform	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:44	MFF
Bromomethane	ND	0.0096	mg/Kg dry	1	V-34	SW-846 8260C	3/13/19	3/14/19 10:44	MFF
2-Butanone (MEK)	ND	0.039	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:44	MFF
n-Butylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:44	MFF
sec-Butylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:44	MFF
tert-Butylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:44	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00096	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:44	MFF
Carbon Disulfide	ND	0.0058	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:44	MFF
Carbon Tetrachloride	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:44	MFF
Chlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:44	MFF
Chlorodibromomethane	ND	0.00096	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:44	MFF
Chloroethane	ND	0.0096	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:44	MFF
Chloroform	ND	0.0039	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:44	MFF
Chloromethane	ND	0.0096	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:44	MFF
2-Chlorotoluene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:44	MFF
4-Chlorotoluene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:44	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:44	MFF
1,2-Dibromoethane (EDB)	ND	0.00096	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:44	MFF
Dibromomethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:44	MFF
1,2-Dichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:44	MFF
1,3-Dichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:44	MFF
1,4-Dichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:44	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0096	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:44	MFF
1,1-Dichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:44	MFF
1,2-Dichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:44	MFF
1,1-Dichloroethylene	ND	0.0039	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:44	MFF
cis-1,2-Dichloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:44	MFF
trans-1,2-Dichloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:44	MFF
1,2-Dichloropropane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:44	MFF
1,3-Dichloropropane	ND	0.00096	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:44	MFF
2,2-Dichloropropane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:44	MFF
1,1-Dichloropropene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:44	MFF
cis-1,3-Dichloropropene	ND	0.00096	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:44	MFF
trans-1,3-Dichloropropene	ND	0.00096	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:44	MFF
Diethyl Ether	ND	0.0096	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:44	MFF
Diisopropyl Ether (DIPE)	ND	0.00096	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:44	MFF
1,4-Dioxane	ND	0.096	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:44	MFF
Ethylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:44	MFF

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-F3 (5-10)

Sampled: 3/12/2019 09:25

Sample ID: 19C0480-09

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:44	MFF
2-Hexanone (MBK)	ND	0.019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:44	MFF
Isopropylbenzene (Cumene)	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:44	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:44	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0039	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:44	MFF
Methylene Chloride	ND	0.0096	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:44	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:44	MFF
Naphthalene	ND	0.0039	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:44	MFF
n-Propylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:44	MFF
Styrene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:44	MFF
1,1,1,2-Tetrachloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:44	MFF
1,1,2,2-Tetrachloroethane	ND	0.00096	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:44	MFF
Tetrachloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:44	MFF
Tetrahydrofuran	ND	0.0096	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:44	MFF
Toluene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:44	MFF
1,2,3-Trichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:44	MFF
1,2,4-Trichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:44	MFF
1,1,1-Trichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:44	MFF
1,1,2-Trichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:44	MFF
Trichloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:44	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0096	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:44	MFF
1,2,3-Trichloropropane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:44	MFF
1,2,4-Trimethylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:44	MFF
1,3,5-Trimethylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:44	MFF
Vinyl Chloride	ND	0.0096	mg/Kg dry	1	L-04	SW-846 8260C	3/13/19	3/14/19 10:44	MFF
m+p Xylene	ND	0.0039	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:44	MFF
o-Xylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 10:44	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	98.9	70-130	
Toluene-d8	92.8	70-130	
4-Bromofluorobenzene	96.5	70-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-F3 (5-10)

Sampled: 3/12/2019 09:25

Sample ID: 19C0480-09

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatle Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.82	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:12	BGL
Acenaphthylene	ND	0.82	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:12	BGL
Acetophenone	ND	1.6	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:12	BGL
Aniline	ND	1.6	mg/Kg dry	2	L-04, V-34	SW-846 8270D	3/15/19	3/20/19 9:12	BGL
Anthracene	ND	0.82	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:12	BGL
Benzo(a)anthracene	ND	0.82	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:12	BGL
Benzo(a)pyrene	ND	0.82	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:12	BGL
Benzo(b)fluoranthene	ND	0.82	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:12	BGL
Benzo(g,h,i)perylene	ND	0.82	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:12	BGL
Benzo(k)fluoranthene	ND	0.82	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:12	BGL
Bis(2-chloroethoxy)methane	ND	1.6	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:12	BGL
Bis(2-chloroethyl)ether	ND	1.6	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:12	BGL
Bis(2-chloroisopropyl)ether	ND	1.6	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:12	BGL
Bis(2-Ethylhexyl)phthalate	ND	1.6	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:12	BGL
4-Bromophenylphenylether	ND	1.6	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:12	BGL
Butylbenzylphthalate	ND	1.6	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:12	BGL
4-Chloroaniline	ND	3.2	mg/Kg dry	2	V-34	SW-846 8270D	3/15/19	3/20/19 9:12	BGL
2-Chloronaphthalene	ND	1.6	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:12	BGL
2-Chlorophenol	ND	1.6	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:12	BGL
Chrysene	ND	0.82	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:12	BGL
Dibenz(a,h)anthracene	ND	0.82	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:12	BGL
Dibenzofuran	ND	1.6	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:12	BGL
Di-n-butylphthalate	ND	1.6	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:12	BGL
1,2-Dichlorobenzene	ND	1.6	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:12	BGL
1,3-Dichlorobenzene	ND	1.6	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:12	BGL
1,4-Dichlorobenzene	ND	1.6	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:12	BGL
3,3-Dichlorobenzidine	ND	0.82	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:12	BGL
2,4-Dichlorophenol	ND	1.6	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:12	BGL
Diethylphthalate	ND	1.6	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:12	BGL
2,4-Dimethylphenol	ND	1.6	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:12	BGL
Dimethylphthalate	ND	1.6	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:12	BGL
2,4-Dinitrophenol	ND	3.2	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:12	BGL
2,4-Dinitrotoluene	ND	1.6	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:12	BGL
2,6-Dinitrotoluene	ND	1.6	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:12	BGL
Di-n-octylphthalate	ND	1.6	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:12	BGL
1,2-Diphenylhydrazine/Azobenzene	ND	1.6	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:12	BGL
Fluoranthene	0.83	0.82	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:12	BGL
Fluorene	ND	0.82	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:12	BGL
Hexachlorobenzene	ND	1.6	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:12	BGL
Hexachlorobutadiene	ND	1.6	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:12	BGL
Hexachloroethane	ND	1.6	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:12	BGL
Indeno(1,2,3-cd)pyrene	ND	0.82	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:12	BGL
Isophorone	ND	1.6	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:12	BGL
2-Methylnaphthalene	ND	0.82	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:12	BGL

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-F3 (5-10)

Sampled: 3/12/2019 09:25

Sample ID: 19C0480-09

Sample Matrix: Soil

Sample Flags: RL-08

**Semivolatile Organic Compounds by GC/MS**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	1.6	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:12	BGL
3/4-Methylphenol	ND	1.6	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:12	BGL
Naphthalene	ND	0.82	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:12	BGL
Nitrobenzene	ND	1.6	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:12	BGL
2-Nitrophenol	ND	1.6	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:12	BGL
4-Nitrophenol	ND	3.2	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:12	BGL
Pentachlorophenol	ND	1.6	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:12	BGL
Phenanthrene	ND	0.82	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:12	BGL
Phenol	ND	1.6	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:12	BGL
Pyrene	0.90	0.82	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:12	BGL
1,2,4-Trichlorobenzene	ND	1.6	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:12	BGL
2,4,5-Trichlorophenol	ND	1.6	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:12	BGL
2,4,6-Trichlorophenol	ND	1.6	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:12	BGL

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	82.5	30-130	
Phenol-d6	84.4	30-130	
Nitrobenzene-d5	76.6	30-130	
2-Fluorobiphenyl	87.2	30-130	
2,4,6-Tribromophenol	89.0	30-130	
p-Terphenyl-d14	94.8	30-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-F3 (5-10)

Sampled: 3/12/2019 09:25

Sample ID: 19C0480-09

Sample Matrix: Soil

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.098	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 16:18	JMB
Aroclor-1221 [1]	ND	0.098	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 16:18	JMB
Aroclor-1232 [1]	ND	0.098	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 16:18	JMB
Aroclor-1242 [1]	ND	0.098	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 16:18	JMB
Aroclor-1248 [1]	ND	0.098	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 16:18	JMB
Aroclor-1254 [2]	0.21	0.098	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 16:18	JMB
Aroclor-1260 [1]	ND	0.098	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 16:18	JMB
Aroclor-1262 [1]	ND	0.098	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 16:18	JMB
Aroclor-1268 [1]	ND	0.098	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 16:18	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		84.6	30-150					3/18/19 16:18	
Decachlorobiphenyl [2]		90.8	30-150					3/18/19 16:18	
Tetrachloro-m-xylene [1]		105	30-150					3/18/19 16:18	
Tetrachloro-m-xylene [2]		104	30-150					3/18/19 16:18	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-F3 (5-10)

Sampled: 3/12/2019 09:25

Sample ID: 19C0480-09

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	910	200	mg/Kg dry	10		SW-846 8100 Modified	3/15/19	3/19/19 13:30	RMW
<b>Surrogates</b>		<b>% Recovery</b>	<b>Recovery Limits</b>		<b>Flag/Qual</b>				
2-Fluorobiphenyl		55.1	40-140					3/19/19 13:30	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-F3 (5-10)

Sampled: 3/12/2019 09:25

Sample ID: 19C0480-09

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	2.0	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:13	QNW
Arsenic	4.7	2.0	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:13	QNW
Barium	34	2.0	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:13	QNW
Beryllium	0.34	0.20	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:13	QNW
Cadmium	0.40	0.20	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:13	QNW
Chromium	13	0.41	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:13	QNW
Lead	26	0.61	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:13	QNW
Mercury	0.030	0.029	mg/Kg dry	1		SW-846 7471B	3/13/19	3/14/19 16:20	TBC
Nickel	12	0.41	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:13	QNW
Selenium	ND	4.1	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:13	QNW
Silver	ND	0.41	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:13	QNW
Thallium	ND	2.0	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:13	QNW
Vanadium	21	0.81	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:13	QNW
Zinc	67	0.81	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:13	QNW



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-F3 (5-10)

Sampled: 3/12/2019 09:25

Sample ID: 19C0480-09

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	81.9		% Wt	1		SM 2540G	3/18/19	3/18/19 19:44	KMG
Ignitability	Absent		present/absent	1		SW-846 1030	3/14/19	3/14/19 11:10	KMV
pH @20.3°C	7.9		pH Units	1		SW-846 9045C	3/12/19	3/12/19 19:57	AIA
Reactive Cyanide	ND	4.0	mg/Kg	1		SW-846 9014	3/14/19	3/15/19 11:07	KMV
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	3/14/19	3/15/19 10:28	KMV
Specific conductance	31	2.0	µmhos/cm	1		SM21-22 2510B Modified	3/14/19	3/14/19 12:49	EC

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-E2 (0-5)

Sampled: 3/12/2019 10:00

Sample ID: 19C0480-10

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.076	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:34	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00076	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:34	MFF
Benzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:34	MFF
Bromobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:34	MFF
Bromochloromethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:34	MFF
Bromodichloromethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:34	MFF
Bromoform	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:34	MFF
Bromomethane	ND	0.0076	mg/Kg dry	1	V-34	SW-846 8260C	3/13/19	3/14/19 11:34	MFF
2-Butanone (MEK)	ND	0.030	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:34	MFF
n-Butylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:34	MFF
sec-Butylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:34	MFF
tert-Butylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:34	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00076	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:34	MFF
Carbon Disulfide	ND	0.0046	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:34	MFF
Carbon Tetrachloride	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:34	MFF
Chlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:34	MFF
Chlorodibromomethane	ND	0.00076	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:34	MFF
Chloroethane	ND	0.0076	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:34	MFF
Chloroform	ND	0.0030	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:34	MFF
Chloromethane	ND	0.0076	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:34	MFF
2-Chlorotoluene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:34	MFF
4-Chlorotoluene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:34	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:34	MFF
1,2-Dibromoethane (EDB)	ND	0.00076	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:34	MFF
Dibromomethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:34	MFF
1,2-Dichlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:34	MFF
1,3-Dichlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:34	MFF
1,4-Dichlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:34	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0076	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:34	MFF
1,1-Dichloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:34	MFF
1,2-Dichloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:34	MFF
1,1-Dichloroethylene	ND	0.0030	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:34	MFF
cis-1,2-Dichloroethylene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:34	MFF
trans-1,2-Dichloroethylene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:34	MFF
1,2-Dichloropropane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:34	MFF
1,3-Dichloropropane	ND	0.00076	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:34	MFF
2,2-Dichloropropane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:34	MFF
1,1-Dichloropropene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:34	MFF
cis-1,3-Dichloropropene	ND	0.00076	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:34	MFF
trans-1,3-Dichloropropene	ND	0.00076	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:34	MFF
Diethyl Ether	ND	0.0076	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:34	MFF
Diisopropyl Ether (DIPE)	ND	0.00076	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:34	MFF
1,4-Dioxane	ND	0.076	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:34	MFF
Ethylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:34	MFF

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-E2 (0-5)

Sampled: 3/12/2019 10:00

Sample ID: 19C0480-10

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:34	MFF
2-Hexanone (MBK)	ND	0.015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:34	MFF
Isopropylbenzene (Cumene)	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:34	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:34	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0030	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:34	MFF
Methylene Chloride	ND	0.0076	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:34	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:34	MFF
Naphthalene	ND	0.0030	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:34	MFF
n-Propylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:34	MFF
Styrene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:34	MFF
1,1,1,2-Tetrachloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:34	MFF
1,1,2,2-Tetrachloroethane	ND	0.00076	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:34	MFF
Tetrachloroethylene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:34	MFF
Tetrahydrofuran	ND	0.0076	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:34	MFF
Toluene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:34	MFF
1,2,3-Trichlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:34	MFF
1,2,4-Trichlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:34	MFF
1,1,1-Trichloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:34	MFF
1,1,2-Trichloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:34	MFF
Trichloroethylene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:34	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0076	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:34	MFF
1,2,3-Trichloropropane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:34	MFF
1,2,4-Trimethylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:34	MFF
1,3,5-Trimethylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:34	MFF
Vinyl Chloride	ND	0.0076	mg/Kg dry	1	L-04	SW-846 8260C	3/13/19	3/14/19 11:34	MFF
m+p Xylene	ND	0.0030	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:34	MFF
o-Xylene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:34	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	101	70-130	
Toluene-d8	94.3	70-130	
4-Bromofluorobenzene	95.6	70-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-E2 (0-5)

Sampled: 3/12/2019 10:00

Sample ID: 19C0480-10

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatle Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:41	BGL
Acenaphthylene	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:41	BGL
Acetophenone	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:41	BGL
Aniline	ND	1.5	mg/Kg dry	2	L-04, V-34	SW-846 8270D	3/15/19	3/20/19 9:41	BGL
Anthracene	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:41	BGL
Benzo(a)anthracene	1.8	0.75	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:41	BGL
Benzo(a)pyrene	1.7	0.75	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:41	BGL
Benzo(b)fluoranthene	1.9	0.75	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:41	BGL
Benzo(g,h,i)perylene	1.2	0.75	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:41	BGL
Benzo(k)fluoranthene	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:41	BGL
Bis(2-chloroethoxy)methane	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:41	BGL
Bis(2-chloroethyl)ether	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:41	BGL
Bis(2-chloroisopropyl)ether	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:41	BGL
Bis(2-Ethylhexyl)phthalate	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:41	BGL
4-Bromophenylphenylether	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:41	BGL
Butylbenzylphthalate	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:41	BGL
4-Chloroaniline	ND	2.9	mg/Kg dry	2	V-34	SW-846 8270D	3/15/19	3/20/19 9:41	BGL
2-Chloronaphthalene	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:41	BGL
2-Chlorophenol	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:41	BGL
Chrysene	1.8	0.75	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:41	BGL
Dibenz(a,h)anthracene	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:41	BGL
Dibenzofuran	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:41	BGL
Di-n-butylphthalate	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:41	BGL
1,2-Dichlorobenzene	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:41	BGL
1,3-Dichlorobenzene	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:41	BGL
1,4-Dichlorobenzene	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:41	BGL
3,3-Dichlorobenzidine	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:41	BGL
2,4-Dichlorophenol	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:41	BGL
Diethylphthalate	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:41	BGL
2,4-Dimethylphenol	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:41	BGL
Dimethylphthalate	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:41	BGL
2,4-Dinitrophenol	ND	2.9	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:41	BGL
2,4-Dinitrotoluene	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:41	BGL
2,6-Dinitrotoluene	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:41	BGL
Di-n-octylphthalate	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:41	BGL
1,2-Diphenylhydrazine/Azobenzene	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:41	BGL
Fluoranthene	3.1	0.75	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:41	BGL
Fluorene	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:41	BGL
Hexachlorobenzene	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:41	BGL
Hexachlorobutadiene	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:41	BGL
Hexachloroethane	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:41	BGL
Indeno(1,2,3-cd)pyrene	1.1	0.75	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:41	BGL
Isophorone	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:41	BGL
2-Methylnaphthalene	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:41	BGL

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-E2 (0-5)

Sampled: 3/12/2019 10:00

Sample ID: 19C0480-10

Sample Matrix: Soil

Sample Flags: RL-08

**Semivolatile Organic Compounds by GC/MS**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:41	BGL
3/4-Methylphenol	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:41	BGL
Naphthalene	ND	0.75	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:41	BGL
Nitrobenzene	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:41	BGL
2-Nitrophenol	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:41	BGL
4-Nitrophenol	ND	2.9	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:41	BGL
Pentachlorophenol	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:41	BGL
Phenanthrene	2.2	0.75	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:41	BGL
Phenol	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:41	BGL
Pyrene	3.6	0.75	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:41	BGL
1,2,4-Trichlorobenzene	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:41	BGL
2,4,5-Trichlorophenol	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:41	BGL
2,4,6-Trichlorophenol	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 9:41	BGL
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2-Fluorophenol		84.0	30-130					3/20/19 9:41	
Phenol-d6		85.4	30-130					3/20/19 9:41	
Nitrobenzene-d5		84.1	30-130					3/20/19 9:41	
2-Fluorobiphenyl		89.3	30-130					3/20/19 9:41	
2,4,6-Tribromophenol		93.5	30-130					3/20/19 9:41	
p-Terphenyl-d14		104	30-130					3/20/19 9:41	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-E2 (0-5)

Sampled: 3/12/2019 10:00

Sample ID: 19C0480-10

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.088	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 17:23	JMB
Aroclor-1221 [1]	ND	0.088	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 17:23	JMB
Aroclor-1232 [1]	ND	0.088	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 17:23	JMB
Aroclor-1242 [1]	ND	0.088	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 17:23	JMB
Aroclor-1248 [1]	ND	0.088	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 17:23	JMB
Aroclor-1254 [1]	ND	0.088	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 17:23	JMB
Aroclor-1260 [1]	ND	0.088	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 17:23	JMB
Aroclor-1262 [1]	ND	0.088	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 17:23	JMB
Aroclor-1268 [1]	ND	0.088	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 17:23	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		83.7	30-150					3/18/19 17:23	
Decachlorobiphenyl [2]		88.4	30-150					3/18/19 17:23	
Tetrachloro-m-xylene [1]		105	30-150					3/18/19 17:23	
Tetrachloro-m-xylene [2]		99.7	30-150					3/18/19 17:23	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-E2 (0-5)

Sampled: 3/12/2019 10:00

Sample ID: 19C0480-10

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	1100	370	mg/Kg dry	20		SW-846 8100 Modified	3/15/19	3/19/19 12:00	RMW
<b>Surrogates</b>		<b>% Recovery</b>	<b>Recovery Limits</b>		<b>Flag/Qual</b>				
2-Fluorobiphenyl		*	40-140		S-01			3/19/19 12:00	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-E2 (0-5)

Sampled: 3/12/2019 10:00

Sample ID: 19C0480-10

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.8	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:18	QNW
Arsenic	4.8	1.8	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:18	QNW
Barium	33	1.8	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:18	QNW
Beryllium	0.37	0.18	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:18	QNW
Cadmium	0.37	0.18	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:18	QNW
Chromium	15	0.37	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:18	QNW
Lead	41	0.55	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:18	QNW
Mercury	0.046	0.028	mg/Kg dry	1		SW-846 7471B	3/13/19	3/14/19 16:22	TBC
Nickel	13	0.37	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:18	QNW
Selenium	ND	3.7	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:18	QNW
Silver	ND	0.37	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:18	QNW
Thallium	ND	1.8	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:18	QNW
Vanadium	29	0.73	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:18	QNW
Zinc	53	0.73	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:18	QNW



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-E2 (0-5)

Sampled: 3/12/2019 10:00

Sample ID: 19C0480-10

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	90.3		% Wt	1		SM 2540G	3/18/19	3/18/19 19:45	KMG
Ignitability	Absent		present/absent	1		SW-846 1030	3/14/19	3/14/19 11:10	KMV
pH @20.7°C	7.7		pH Units	1		SW-846 9045C	3/12/19	3/12/19 19:57	AIA
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	3/14/19	3/15/19 11:07	KMV
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	3/14/19	3/15/19 10:28	KMV
Specific conductance	18	2.0	µmhos/cm	1		SM21-22 2510B Modified	3/14/19	3/14/19 12:49	EC

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-E2 (5-10)

Sampled: 3/12/2019 10:05

Sample ID: 19C0480-11

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.096	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:58	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00096	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:58	MFF
Benzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:58	MFF
Bromobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:58	MFF
Bromochloromethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:58	MFF
Bromodichloromethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:58	MFF
Bromoform	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:58	MFF
Bromomethane	ND	0.0096	mg/Kg dry	1	V-34	SW-846 8260C	3/13/19	3/14/19 11:58	MFF
2-Butanone (MEK)	ND	0.038	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:58	MFF
n-Butylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:58	MFF
sec-Butylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:58	MFF
tert-Butylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:58	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00096	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:58	MFF
Carbon Disulfide	ND	0.0058	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:58	MFF
Carbon Tetrachloride	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:58	MFF
Chlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:58	MFF
Chlorodibromomethane	ND	0.00096	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:58	MFF
Chloroethane	ND	0.0096	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:58	MFF
Chloroform	ND	0.0038	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:58	MFF
Chloromethane	ND	0.0096	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:58	MFF
2-Chlorotoluene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:58	MFF
4-Chlorotoluene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:58	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:58	MFF
1,2-Dibromoethane (EDB)	ND	0.00096	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:58	MFF
Dibromomethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:58	MFF
1,2-Dichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:58	MFF
1,3-Dichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:58	MFF
1,4-Dichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:58	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0096	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:58	MFF
1,1-Dichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:58	MFF
1,2-Dichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:58	MFF
1,1-Dichloroethylene	ND	0.0038	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:58	MFF
cis-1,2-Dichloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:58	MFF
trans-1,2-Dichloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:58	MFF
1,2-Dichloropropane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:58	MFF
1,3-Dichloropropane	ND	0.00096	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:58	MFF
2,2-Dichloropropane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:58	MFF
1,1-Dichloropropene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:58	MFF
cis-1,3-Dichloropropene	ND	0.00096	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:58	MFF
trans-1,3-Dichloropropene	ND	0.00096	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:58	MFF
Diethyl Ether	ND	0.0096	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:58	MFF
Diisopropyl Ether (DIPE)	ND	0.00096	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:58	MFF
1,4-Dioxane	ND	0.096	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:58	MFF
Ethylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:58	MFF

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-E2 (5-10)

Sampled: 3/12/2019 10:05

Sample ID: 19C0480-11

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:58	MFF
2-Hexanone (MBK)	ND	0.019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:58	MFF
Isopropylbenzene (Cumene)	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:58	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:58	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0038	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:58	MFF
Methylene Chloride	ND	0.0096	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:58	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:58	MFF
Naphthalene	ND	0.0038	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:58	MFF
n-Propylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:58	MFF
Styrene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:58	MFF
1,1,1,2-Tetrachloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:58	MFF
1,1,2,2-Tetrachloroethane	ND	0.00096	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:58	MFF
Tetrachloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:58	MFF
Tetrahydrofuran	ND	0.0096	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:58	MFF
Toluene	0.0023	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:58	MFF
1,2,3-Trichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:58	MFF
1,2,4-Trichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:58	MFF
1,1,1-Trichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:58	MFF
1,1,2-Trichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:58	MFF
Trichloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:58	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0096	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:58	MFF
1,2,3-Trichloropropane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:58	MFF
1,2,4-Trimethylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:58	MFF
1,3,5-Trimethylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:58	MFF
Vinyl Chloride	ND	0.0096	mg/Kg dry	1	L-04	SW-846 8260C	3/13/19	3/14/19 11:58	MFF
m+p Xylene	ND	0.0038	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:58	MFF
o-Xylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 11:58	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	99.6	70-130	
Toluene-d8	91.9	70-130	
4-Bromofluorobenzene	95.5	70-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-E2 (5-10)

Sampled: 3/12/2019 10:05

Sample ID: 19C0480-11

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatiles Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:08	BGL
Acenaphthylene	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:08	BGL
Acetophenone	ND	1.6	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:08	BGL
Aniline	ND	1.6	mg/Kg dry	2	L-04, V-34	SW-846 8270D	3/15/19	3/20/19 10:08	BGL
Anthracene	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:08	BGL
Benzo(a)anthracene	1.4	0.79	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:08	BGL
Benzo(a)pyrene	1.5	0.79	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:08	BGL
Benzo(b)fluoranthene	1.7	0.79	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:08	BGL
Benzo(g,h,i)perylene	0.99	0.79	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:08	BGL
Benzo(k)fluoranthene	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:08	BGL
Bis(2-chloroethoxy)methane	ND	1.6	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:08	BGL
Bis(2-chloroethyl)ether	ND	1.6	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:08	BGL
Bis(2-chloroisopropyl)ether	ND	1.6	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:08	BGL
Bis(2-Ethylhexyl)phthalate	ND	1.6	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:08	BGL
4-Bromophenylphenylether	ND	1.6	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:08	BGL
Butylbenzylphthalate	ND	1.6	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:08	BGL
4-Chloroaniline	ND	3.1	mg/Kg dry	2	V-34	SW-846 8270D	3/15/19	3/20/19 10:08	BGL
2-Chloronaphthalene	ND	1.6	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:08	BGL
2-Chlorophenol	ND	1.6	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:08	BGL
Chrysene	1.3	0.79	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:08	BGL
Dibenz(a,h)anthracene	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:08	BGL
Dibenzofuran	ND	1.6	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:08	BGL
Di-n-butylphthalate	ND	1.6	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:08	BGL
1,2-Dichlorobenzene	ND	1.6	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:08	BGL
1,3-Dichlorobenzene	ND	1.6	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:08	BGL
1,4-Dichlorobenzene	ND	1.6	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:08	BGL
3,3-Dichlorobenzidine	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:08	BGL
2,4-Dichlorophenol	ND	1.6	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:08	BGL
Diethylphthalate	ND	1.6	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:08	BGL
2,4-Dimethylphenol	ND	1.6	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:08	BGL
Dimethylphthalate	ND	1.6	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:08	BGL
2,4-Dinitrophenol	ND	3.1	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:08	BGL
2,4-Dinitrotoluene	ND	1.6	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:08	BGL
2,6-Dinitrotoluene	ND	1.6	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:08	BGL
Di-n-octylphthalate	ND	1.6	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:08	BGL
1,2-Diphenylhydrazine/Azobenzene	ND	1.6	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:08	BGL
Fluoranthene	2.5	0.79	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:08	BGL
Fluorene	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:08	BGL
Hexachlorobenzene	ND	1.6	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:08	BGL
Hexachlorobutadiene	ND	1.6	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:08	BGL
Hexachloroethane	ND	1.6	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:08	BGL
Indeno(1,2,3-cd)pyrene	1.0	0.79	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:08	BGL
Isophorone	ND	1.6	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:08	BGL
2-Methylnaphthalene	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:08	BGL

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-E2 (5-10)

Sampled: 3/12/2019 10:05

Sample ID: 19C0480-11

Sample Matrix: Soil

Sample Flags: RL-08

**Semivolatile Organic Compounds by GC/MS**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	1.6	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:08	BGL
3/4-Methylphenol	ND	1.6	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:08	BGL
Naphthalene	ND	0.79	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:08	BGL
Nitrobenzene	ND	1.6	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:08	BGL
2-Nitrophenol	ND	1.6	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:08	BGL
4-Nitrophenol	ND	3.1	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:08	BGL
Pentachlorophenol	ND	1.6	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:08	BGL
Phenanthrene	1.3	0.79	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:08	BGL
Phenol	ND	1.6	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:08	BGL
Pyrene	2.6	0.79	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:08	BGL
1,2,4-Trichlorobenzene	ND	1.6	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:08	BGL
2,4,5-Trichlorophenol	ND	1.6	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:08	BGL
2,4,6-Trichlorophenol	ND	1.6	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 10:08	BGL
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2-Fluorophenol		76.8	30-130					3/20/19 10:08	
Phenol-d6		78.1	30-130					3/20/19 10:08	
Nitrobenzene-d5		73.4	30-130					3/20/19 10:08	
2-Fluorobiphenyl		83.2	30-130					3/20/19 10:08	
2,4,6-Tribromophenol		87.9	30-130					3/20/19 10:08	
p-Terphenyl-d14		93.6	30-130					3/20/19 10:08	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-E2 (5-10)

Sampled: 3/12/2019 10:05

Sample ID: 19C0480-11

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.093	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 17:41	JMB
Aroclor-1221 [1]	ND	0.093	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 17:41	JMB
Aroclor-1232 [1]	ND	0.093	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 17:41	JMB
Aroclor-1242 [1]	ND	0.093	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 17:41	JMB
Aroclor-1248 [1]	ND	0.093	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 17:41	JMB
Aroclor-1254 [1]	ND	0.093	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 17:41	JMB
Aroclor-1260 [1]	ND	0.093	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 17:41	JMB
Aroclor-1262 [1]	ND	0.093	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 17:41	JMB
Aroclor-1268 [1]	ND	0.093	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 17:41	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		82.0	30-150					3/18/19 17:41	
Decachlorobiphenyl [2]		87.7	30-150					3/18/19 17:41	
Tetrachloro-m-xylene [1]		106	30-150					3/18/19 17:41	
Tetrachloro-m-xylene [2]		102	30-150					3/18/19 17:41	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-E2 (5-10)

Sampled: 3/12/2019 10:05

Sample ID: 19C0480-11

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	870	190	mg/Kg dry	10		SW-846 8100 Modified	3/15/19	3/19/19 12:50	RMW
<b>Surrogates</b>		<b>% Recovery</b>	<b>Recovery Limits</b>		<b>Flag/Qual</b>				
2-Fluorobiphenyl		70.3	40-140					3/19/19 12:50	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-E2 (5-10)

Sampled: 3/12/2019 10:05

Sample ID: 19C0480-11

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:23	QNW
Arsenic	3.9	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:23	QNW
Barium	38	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:23	QNW
Beryllium	0.37	0.19	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:23	QNW
Cadmium	0.40	0.19	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:23	QNW
Chromium	16	0.39	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:23	QNW
Lead	53	0.58	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:23	QNW
Mercury	0.045	0.031	mg/Kg dry	1		SW-846 7471B	3/13/19	3/14/19 16:23	TBC
Nickel	13	0.39	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:23	QNW
Selenium	ND	3.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:23	QNW
Silver	ND	0.39	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:23	QNW
Thallium	ND	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:23	QNW
Vanadium	28	0.78	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:23	QNW
Zinc	51	0.78	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:23	QNW



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-E2 (5-10)

Sampled: 3/12/2019 10:05

Sample ID: 19C0480-11

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	84.5		% Wt	1		SM 2540G	3/18/19	3/18/19 19:45	KMG
Ignitability	Absent		present/absent	1		SW-846 1030	3/14/19	3/14/19 11:10	KMV
pH @20.6°C	8.0		pH Units	1		SW-846 9045C	3/12/19	3/12/19 20:38	AIA
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	3/16/19	3/18/19 13:15	DJM
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	3/16/19	3/18/19 13:15	DJM
Specific conductance	15	2.0	µmhos/cm	1		SM21-22 2510B Modified	3/15/19	3/15/19 12:21	EC

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-D2 (0-5)

Sampled: 3/12/2019 10:20

Sample ID: 19C0480-12

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.088	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:23	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00088	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:23	MFF
Benzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:23	MFF
Bromobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:23	MFF
Bromochloromethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:23	MFF
Bromodichloromethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:23	MFF
Bromoform	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:23	MFF
Bromomethane	ND	0.0088	mg/Kg dry	1	V-34	SW-846 8260C	3/13/19	3/14/19 12:23	MFF
2-Butanone (MEK)	ND	0.035	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:23	MFF
n-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:23	MFF
sec-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:23	MFF
tert-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:23	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00088	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:23	MFF
Carbon Disulfide	ND	0.0053	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:23	MFF
Carbon Tetrachloride	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:23	MFF
Chlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:23	MFF
Chlorodibromomethane	ND	0.00088	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:23	MFF
Chloroethane	ND	0.0088	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:23	MFF
Chloroform	ND	0.0035	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:23	MFF
Chloromethane	ND	0.0088	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:23	MFF
2-Chlorotoluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:23	MFF
4-Chlorotoluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:23	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:23	MFF
1,2-Dibromoethane (EDB)	ND	0.00088	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:23	MFF
Dibromomethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:23	MFF
1,2-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:23	MFF
1,3-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:23	MFF
1,4-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:23	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0088	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:23	MFF
1,1-Dichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:23	MFF
1,2-Dichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:23	MFF
1,1-Dichloroethylene	ND	0.0035	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:23	MFF
cis-1,2-Dichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:23	MFF
trans-1,2-Dichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:23	MFF
1,2-Dichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:23	MFF
1,3-Dichloropropane	ND	0.00088	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:23	MFF
2,2-Dichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:23	MFF
1,1-Dichloropropene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:23	MFF
cis-1,3-Dichloropropene	ND	0.00088	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:23	MFF
trans-1,3-Dichloropropene	ND	0.00088	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:23	MFF
Diethyl Ether	ND	0.0088	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:23	MFF
Diisopropyl Ether (DIPE)	ND	0.00088	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:23	MFF
1,4-Dioxane	ND	0.088	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:23	MFF
Ethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:23	MFF

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-D2 (0-5)

Sampled: 3/12/2019 10:20

Sample ID: 19C0480-12

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:23	MFF
2-Hexanone (MBK)	ND	0.018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:23	MFF
Isopropylbenzene (Cumene)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:23	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:23	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0035	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:23	MFF
Methylene Chloride	ND	0.0088	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:23	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:23	MFF
Naphthalene	ND	0.0035	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:23	MFF
n-Propylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:23	MFF
Styrene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:23	MFF
1,1,1,2-Tetrachloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:23	MFF
1,1,2,2-Tetrachloroethane	ND	0.00088	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:23	MFF
Tetrachloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:23	MFF
Tetrahydrofuran	ND	0.0088	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:23	MFF
Toluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:23	MFF
1,2,3-Trichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:23	MFF
1,2,4-Trichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:23	MFF
1,1,1-Trichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:23	MFF
1,1,2-Trichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:23	MFF
Trichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:23	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0088	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:23	MFF
1,2,3-Trichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:23	MFF
1,2,4-Trimethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:23	MFF
1,3,5-Trimethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:23	MFF
Vinyl Chloride	ND	0.0088	mg/Kg dry	1	L-04	SW-846 8260C	3/13/19	3/14/19 12:23	MFF
m+p Xylene	ND	0.0035	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:23	MFF
o-Xylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:23	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	97.8	70-130	
Toluene-d8	92.6	70-130	
4-Bromofluorobenzene	96.2	70-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-D2 (0-5)

Sampled: 3/12/2019 10:20

Sample ID: 19C0480-12

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatiles Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:07	IMR
Acenaphthylene	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:07	IMR
Acetophenone	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:07	IMR
Aniline	ND	0.76	mg/Kg dry	1	L-04, V-34	SW-846 8270D	3/15/19	3/19/19 15:07	IMR
Anthracene	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:07	IMR
Benzo(a)anthracene	1.5	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:07	IMR
Benzo(a)pyrene	1.6	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:07	IMR
Benzo(b)fluoranthene	1.9	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:07	IMR
Benzo(g,h,i)perylene	1.0	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:07	IMR
Benzo(k)fluoranthene	0.71	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:07	IMR
Bis(2-chloroethoxy)methane	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:07	IMR
Bis(2-chloroethyl)ether	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:07	IMR
Bis(2-chloroisopropyl)ether	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:07	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:07	IMR
4-Bromophenylphenylether	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:07	IMR
Butylbenzylphthalate	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:07	IMR
4-Chloroaniline	ND	1.5	mg/Kg dry	1	V-34	SW-846 8270D	3/15/19	3/19/19 15:07	IMR
2-Chloronaphthalene	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:07	IMR
2-Chlorophenol	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:07	IMR
Chrysene	1.4	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:07	IMR
Dibenz(a,h)anthracene	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:07	IMR
Dibenzofuran	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:07	IMR
Di-n-butylphthalate	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:07	IMR
1,2-Dichlorobenzene	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:07	IMR
1,3-Dichlorobenzene	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:07	IMR
1,4-Dichlorobenzene	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:07	IMR
3,3-Dichlorobenzidine	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:07	IMR
2,4-Dichlorophenol	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:07	IMR
Diethylphthalate	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:07	IMR
2,4-Dimethylphenol	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:07	IMR
Dimethylphthalate	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:07	IMR
2,4-Dinitrophenol	ND	1.5	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:07	IMR
2,4-Dinitrotoluene	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:07	IMR
2,6-Dinitrotoluene	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:07	IMR
Di-n-octylphthalate	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:07	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:07	IMR
Fluoranthene	2.6	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:07	IMR
Fluorene	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:07	IMR
Hexachlorobenzene	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:07	IMR
Hexachlorobutadiene	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:07	IMR
Hexachloroethane	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:07	IMR
Indeno(1,2,3-cd)pyrene	1.0	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:07	IMR
Isophorone	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:07	IMR
2-Methylnaphthalene	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:07	IMR

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-D2 (0-5)

Sampled: 3/12/2019 10:20

Sample ID: 19C0480-12

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:07	IMR
3/4-Methylphenol	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:07	IMR
Naphthalene	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:07	IMR
Nitrobenzene	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:07	IMR
2-Nitrophenol	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:07	IMR
4-Nitrophenol	ND	1.5	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:07	IMR
Pentachlorophenol	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:07	IMR
Phenanthrene	1.4	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:07	IMR
Phenol	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:07	IMR
Pyrene	2.9	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:07	IMR
1,2,4-Trichlorobenzene	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:07	IMR
2,4,5-Trichlorophenol	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:07	IMR
2,4,6-Trichlorophenol	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:07	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	80.6	30-130	
Phenol-d6	81.4	30-130	
Nitrobenzene-d5	78.6	30-130	
2-Fluorobiphenyl	87.1	30-130	
2,4,6-Tribromophenol	90.2	30-130	
p-Terphenyl-d14	103	30-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-D2 (0-5)

Sampled: 3/12/2019 10:20

Sample ID: 19C0480-12

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 17:59	JMB
Aroclor-1221 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 17:59	JMB
Aroclor-1232 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 17:59	JMB
Aroclor-1242 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 17:59	JMB
Aroclor-1248 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 17:59	JMB
Aroclor-1254 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 17:59	JMB
Aroclor-1260 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 17:59	JMB
Aroclor-1262 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 17:59	JMB
Aroclor-1268 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 17:59	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		84.5	30-150					3/18/19 17:59	
Decachlorobiphenyl [2]		92.4	30-150					3/18/19 17:59	
Tetrachloro-m-xylene [1]		107	30-150					3/18/19 17:59	
Tetrachloro-m-xylene [2]		102	30-150					3/18/19 17:59	

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-D2 (0-5)

Sampled: 3/12/2019 10:20

Sample ID: 19C0480-12

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	860	190	mg/Kg dry	10		SW-846 8100 Modified	3/15/19	3/19/19 13:10	RMW
<b>Surrogates</b>		<b>% Recovery</b>	<b>Recovery Limits</b>		<b>Flag/Qual</b>				
2-Fluorobiphenyl		63.4	40-140					3/19/19 13:10	

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-D2 (0-5)

Sampled: 3/12/2019 10:20

Sample ID: 19C0480-12

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:28	QNW
Arsenic	4.7	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:28	QNW
Barium	30	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:28	QNW
Beryllium	0.34	0.19	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:28	QNW
Cadmium	0.33	0.19	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:28	QNW
Chromium	15	0.37	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:28	QNW
Lead	53	0.56	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:28	QNW
Mercury	0.061	0.028	mg/Kg dry	1		SW-846 7471B	3/13/19	3/14/19 16:29	TBC
Nickel	12	0.37	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:28	QNW
Selenium	ND	3.7	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:28	QNW
Silver	ND	0.37	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:28	QNW
Thallium	ND	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:28	QNW
Vanadium	24	0.74	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:28	QNW
Zinc	50	0.74	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:28	QNW



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-D2 (0-5)

Sampled: 3/12/2019 10:20

Sample ID: 19C0480-12

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	89.1		% Wt	1		SM 2540G	3/18/19	3/18/19 19:45	KMG
Ignitability	Absent		present/absent	1		SW-846 1030	3/14/19	3/14/19 11:10	KMV
pH @20.7°C	7.8		pH Units	1		SW-846 9045C	3/12/19	3/12/19 20:38	AIA
Reactive Cyanide	ND	4.0	mg/Kg	1		SW-846 9014	3/16/19	3/18/19 13:15	DJM
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	3/16/19	3/18/19 13:15	DJM
Specific conductance	8.8	2.0	µmhos/cm	1		SM21-22 2510B Modified	3/15/19	3/15/19 12:21	EC

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-D2 (5-10)

Sampled: 3/12/2019 10:25

Sample ID: 19C0480-13

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.10	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:48	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.0010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:48	MFF
Benzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:48	MFF
Bromobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:48	MFF
Bromochloromethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:48	MFF
Bromodichloromethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:48	MFF
Bromoform	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:48	MFF
Bromomethane	ND	0.010	mg/Kg dry	1	V-34	SW-846 8260C	3/13/19	3/14/19 12:48	MFF
2-Butanone (MEK)	ND	0.041	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:48	MFF
n-Butylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:48	MFF
sec-Butylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:48	MFF
tert-Butylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:48	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.0010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:48	MFF
Carbon Disulfide	ND	0.0061	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:48	MFF
Carbon Tetrachloride	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:48	MFF
Chlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:48	MFF
Chlorodibromomethane	ND	0.0010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:48	MFF
Chloroethane	ND	0.010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:48	MFF
Chloroform	ND	0.0041	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:48	MFF
Chloromethane	ND	0.010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:48	MFF
2-Chlorotoluene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:48	MFF
4-Chlorotoluene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:48	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:48	MFF
1,2-Dibromoethane (EDB)	ND	0.0010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:48	MFF
Dibromomethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:48	MFF
1,2-Dichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:48	MFF
1,3-Dichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:48	MFF
1,4-Dichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:48	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:48	MFF
1,1-Dichloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:48	MFF
1,2-Dichloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:48	MFF
1,1-Dichloroethylene	ND	0.0041	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:48	MFF
cis-1,2-Dichloroethylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:48	MFF
trans-1,2-Dichloroethylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:48	MFF
1,2-Dichloropropane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:48	MFF
1,3-Dichloropropane	ND	0.0010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:48	MFF
2,2-Dichloropropane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:48	MFF
1,1-Dichloropropene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:48	MFF
cis-1,3-Dichloropropene	ND	0.0010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:48	MFF
trans-1,3-Dichloropropene	ND	0.0010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:48	MFF
Diethyl Ether	ND	0.010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:48	MFF
Diisopropyl Ether (DIPE)	ND	0.0010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:48	MFF
1,4-Dioxane	ND	0.10	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:48	MFF
Ethylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:48	MFF

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-D2 (5-10)

Sampled: 3/12/2019 10:25

Sample ID: 19C0480-13

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:48	MFF
2-Hexanone (MBK)	ND	0.020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:48	MFF
Isopropylbenzene (Cumene)	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:48	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:48	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0041	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:48	MFF
Methylene Chloride	ND	0.010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:48	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:48	MFF
Naphthalene	ND	0.0041	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:48	MFF
n-Propylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:48	MFF
Styrene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:48	MFF
1,1,1,2-Tetrachloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:48	MFF
1,1,2,2-Tetrachloroethane	ND	0.0010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:48	MFF
Tetrachloroethylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:48	MFF
Tetrahydrofuran	ND	0.010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:48	MFF
Toluene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:48	MFF
1,2,3-Trichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:48	MFF
1,2,4-Trichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:48	MFF
1,1,1-Trichloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:48	MFF
1,1,2-Trichloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:48	MFF
Trichloroethylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:48	MFF
Trichlorofluoromethane (Freon 11)	ND	0.010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:48	MFF
1,2,3-Trichloropropane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:48	MFF
1,2,4-Trimethylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:48	MFF
1,3,5-Trimethylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:48	MFF
Vinyl Chloride	ND	0.010	mg/Kg dry	1	L-04	SW-846 8260C	3/13/19	3/14/19 12:48	MFF
m+p Xylene	ND	0.0041	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:48	MFF
o-Xylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 12:48	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	98.9	70-130	
Toluene-d8	95.7	70-130	
4-Bromofluorobenzene	96.6	70-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-D2 (5-10)

Sampled: 3/12/2019 10:25

Sample ID: 19C0480-13

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatiles Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:46	IMR
Acenaphthylene	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:46	IMR
Acetophenone	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:46	IMR
Aniline	ND	0.78	mg/Kg dry	1	L-04, V-34	SW-846 8270D	3/15/19	3/19/19 15:46	IMR
Anthracene	0.44	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:46	IMR
Benzo(a)anthracene	1.2	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:46	IMR
Benzo(a)pyrene	1.4	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:46	IMR
Benzo(b)fluoranthene	1.5	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:46	IMR
Benzo(g,h,i)perylene	1.0	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:46	IMR
Benzo(k)fluoranthene	0.50	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:46	IMR
Bis(2-chloroethoxy)methane	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:46	IMR
Bis(2-chloroethyl)ether	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:46	IMR
Bis(2-chloroisopropyl)ether	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:46	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:46	IMR
4-Bromophenylphenylether	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:46	IMR
Butylbenzylphthalate	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:46	IMR
4-Chloroaniline	ND	1.5	mg/Kg dry	1	V-34	SW-846 8270D	3/15/19	3/19/19 15:46	IMR
2-Chloronaphthalene	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:46	IMR
2-Chlorophenol	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:46	IMR
Chrysene	1.3	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:46	IMR
Dibenz(a,h)anthracene	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:46	IMR
Dibenzofuran	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:46	IMR
Di-n-butylphthalate	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:46	IMR
1,2-Dichlorobenzene	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:46	IMR
1,3-Dichlorobenzene	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:46	IMR
1,4-Dichlorobenzene	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:46	IMR
3,3-Dichlorobenzidine	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:46	IMR
2,4-Dichlorophenol	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:46	IMR
Diethylphthalate	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:46	IMR
2,4-Dimethylphenol	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:46	IMR
Dimethylphthalate	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:46	IMR
2,4-Dinitrophenol	ND	1.5	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:46	IMR
2,4-Dinitrotoluene	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:46	IMR
2,6-Dinitrotoluene	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:46	IMR
Di-n-octylphthalate	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:46	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:46	IMR
Fluoranthene	2.3	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:46	IMR
Fluorene	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:46	IMR
Hexachlorobenzene	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:46	IMR
Hexachlorobutadiene	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:46	IMR
Hexachloroethane	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:46	IMR
Indeno(1,2,3-cd)pyrene	1.1	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:46	IMR
Isophorone	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:46	IMR
2-Methylnaphthalene	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:46	IMR

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-D2 (5-10)

Sampled: 3/12/2019 10:25

Sample ID: 19C0480-13

Sample Matrix: Soil

Sample Flags: RL-08

**Semivolatile Organic Compounds by GC/MS**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:46	IMR
3/4-Methylphenol	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:46	IMR
Naphthalene	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:46	IMR
Nitrobenzene	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:46	IMR
2-Nitrophenol	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:46	IMR
4-Nitrophenol	ND	1.5	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:46	IMR
Pentachlorophenol	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:46	IMR
Phenanthrene	1.1	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:46	IMR
Phenol	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:46	IMR
Pyrene	2.4	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:46	IMR
1,2,4-Trichlorobenzene	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:46	IMR
2,4,5-Trichlorophenol	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:46	IMR
2,4,6-Trichlorophenol	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 15:46	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	82.1	30-130	
Phenol-d6	83.2	30-130	
Nitrobenzene-d5	78.8	30-130	
2-Fluorobiphenyl	85.8	30-130	
2,4,6-Tribromophenol	88.3	30-130	
p-Terphenyl-d14	96.9	30-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-D2 (5-10)

Sampled: 3/12/2019 10:25

Sample ID: 19C0480-13

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.092	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 18:16	JMB
Aroclor-1221 [1]	ND	0.092	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 18:16	JMB
Aroclor-1232 [1]	ND	0.092	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 18:16	JMB
Aroclor-1242 [1]	ND	0.092	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 18:16	JMB
Aroclor-1248 [1]	ND	0.092	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 18:16	JMB
Aroclor-1254 [1]	ND	0.092	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 18:16	JMB
Aroclor-1260 [1]	ND	0.092	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 18:16	JMB
Aroclor-1262 [1]	ND	0.092	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 18:16	JMB
Aroclor-1268 [1]	ND	0.092	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 18:16	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		80.2	30-150					3/18/19 18:16	
Decachlorobiphenyl [2]		87.3	30-150					3/18/19 18:16	
Tetrachloro-m-xylene [1]		103	30-150					3/18/19 18:16	
Tetrachloro-m-xylene [2]		98.4	30-150					3/18/19 18:16	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-D2 (5-10)

Sampled: 3/12/2019 10:25

Sample ID: 19C0480-13

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	770	380	mg/Kg dry	20		SW-846 8100 Modified	3/15/19	3/19/19 10:00	RMW
<b>Surrogates</b>		<b>% Recovery</b>	<b>Recovery Limits</b>		<b>Flag/Qual</b>				
2-Fluorobiphenyl		*	40-140		S-01			3/19/19 10:00	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-D2 (5-10)

Sampled: 3/12/2019 10:25

Sample ID: 19C0480-13

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:33	QNW
Arsenic	4.6	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:33	QNW
Barium	34	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:33	QNW
Beryllium	0.35	0.19	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:33	QNW
Cadmium	0.35	0.19	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:33	QNW
Chromium	17	0.38	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:33	QNW
Lead	51	0.56	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:33	QNW
Mercury	0.045	0.029	mg/Kg dry	1		SW-846 7471B	3/13/19	3/15/19 13:07	TBC
Nickel	13	0.38	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:33	QNW
Selenium	ND	3.8	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:33	QNW
Silver	ND	0.38	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:33	QNW
Thallium	ND	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:33	QNW
Vanadium	24	0.75	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:33	QNW
Zinc	50	0.75	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:33	QNW



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-D2 (5-10)

Sampled: 3/12/2019 10:25

Sample ID: 19C0480-13

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	87.0		% Wt	1		SM 2540G	3/18/19	3/18/19 19:45	KMG
Ignitability	Absent		present/absent	1		SW-846 1030	3/17/19	3/17/19 12:20	KMV
pH @20.1°C	7.7		pH Units	1		SW-846 9045C	3/12/19	3/12/19 20:38	AIA
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	3/16/19	3/18/19 13:15	DJM
Reactive Sulfide	ND	19	mg/Kg	1		SW-846 9030A	3/16/19	3/18/19 13:15	DJM
Specific conductance	8.7	2.0	µmhos/cm	1		SM21-22 2510B Modified	3/15/19	3/15/19 12:21	EC

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-C2 (0-5)

Sampled: 3/12/2019 10:50

Sample ID: 19C0480-14

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.083	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:12	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00083	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:12	MFF
Benzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:12	MFF
Bromobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:12	MFF
Bromochloromethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:12	MFF
Bromodichloromethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:12	MFF
Bromoform	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:12	MFF
Bromomethane	ND	0.0083	mg/Kg dry	1	V-34	SW-846 8260C	3/13/19	3/14/19 13:12	MFF
2-Butanone (MEK)	ND	0.033	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:12	MFF
n-Butylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:12	MFF
sec-Butylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:12	MFF
tert-Butylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:12	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00083	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:12	MFF
Carbon Disulfide	ND	0.0050	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:12	MFF
Carbon Tetrachloride	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:12	MFF
Chlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:12	MFF
Chlorodibromomethane	ND	0.00083	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:12	MFF
Chloroethane	ND	0.0083	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:12	MFF
Chloroform	ND	0.0033	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:12	MFF
Chloromethane	ND	0.0083	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:12	MFF
2-Chlorotoluene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:12	MFF
4-Chlorotoluene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:12	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:12	MFF
1,2-Dibromoethane (EDB)	ND	0.00083	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:12	MFF
Dibromomethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:12	MFF
1,2-Dichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:12	MFF
1,3-Dichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:12	MFF
1,4-Dichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:12	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0083	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:12	MFF
1,1-Dichloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:12	MFF
1,2-Dichloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:12	MFF
1,1-Dichloroethylene	ND	0.0033	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:12	MFF
cis-1,2-Dichloroethylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:12	MFF
trans-1,2-Dichloroethylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:12	MFF
1,2-Dichloropropane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:12	MFF
1,3-Dichloropropane	ND	0.00083	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:12	MFF
2,2-Dichloropropane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:12	MFF
1,1-Dichloropropene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:12	MFF
cis-1,3-Dichloropropene	ND	0.00083	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:12	MFF
trans-1,3-Dichloropropene	ND	0.00083	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:12	MFF
Diethyl Ether	ND	0.0083	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:12	MFF
Diisopropyl Ether (DIPE)	ND	0.00083	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:12	MFF
1,4-Dioxane	ND	0.083	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:12	MFF
Ethylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:12	MFF

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-C2 (0-5)

Sampled: 3/12/2019 10:50

Sample ID: 19C0480-14

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:12	MFF
2-Hexanone (MBK)	ND	0.017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:12	MFF
Isopropylbenzene (Cumene)	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:12	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:12	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0033	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:12	MFF
Methylene Chloride	ND	0.0083	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:12	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:12	MFF
Naphthalene	ND	0.0033	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:12	MFF
n-Propylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:12	MFF
Styrene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:12	MFF
1,1,1,2-Tetrachloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:12	MFF
1,1,2,2-Tetrachloroethane	ND	0.00083	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:12	MFF
Tetrachloroethylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:12	MFF
Tetrahydrofuran	ND	0.0083	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:12	MFF
Toluene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:12	MFF
1,2,3-Trichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:12	MFF
1,2,4-Trichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:12	MFF
1,1,1-Trichloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:12	MFF
1,1,2-Trichloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:12	MFF
Trichloroethylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:12	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0083	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:12	MFF
1,2,3-Trichloropropane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:12	MFF
1,2,4-Trimethylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:12	MFF
1,3,5-Trimethylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:12	MFF
Vinyl Chloride	ND	0.0083	mg/Kg dry	1	L-04	SW-846 8260C	3/13/19	3/14/19 13:12	MFF
m+p Xylene	ND	0.0033	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:12	MFF
o-Xylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:12	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	101	70-130	
Toluene-d8	94.4	70-130	
4-Bromofluorobenzene	94.3	70-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-C2 (0-5)

Sampled: 3/12/2019 10:50

Sample ID: 19C0480-14

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatle Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:14	IMR
Acenaphthylene	0.99	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:14	IMR
Acetophenone	ND	0.75	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:14	IMR
Aniline	ND	0.75	mg/Kg dry	1	L-04, V-34	SW-846 8270D	3/15/19	3/19/19 16:14	IMR
Anthracene	2.0	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:14	IMR
Benzo(a)anthracene	3.2	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:14	IMR
Benzo(a)pyrene	2.7	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:14	IMR
Benzo(b)fluoranthene	3.2	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:14	IMR
Benzo(g,h,i)perylene	1.6	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:14	IMR
Benzo(k)fluoranthene	1.2	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:14	IMR
Bis(2-chloroethoxy)methane	ND	0.75	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:14	IMR
Bis(2-chloroethyl)ether	ND	0.75	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:14	IMR
Bis(2-chloroisopropyl)ether	ND	0.75	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:14	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.75	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:14	IMR
4-Bromophenylphenylether	ND	0.75	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:14	IMR
Butylbenzylphthalate	ND	0.75	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:14	IMR
4-Chloroaniline	ND	1.5	mg/Kg dry	1	V-34	SW-846 8270D	3/15/19	3/19/19 16:14	IMR
2-Chloronaphthalene	ND	0.75	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:14	IMR
2-Chlorophenol	ND	0.75	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:14	IMR
Chrysene	2.9	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:14	IMR
Dibenz(a,h)anthracene	0.45	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:14	IMR
Dibenzofuran	1.2	0.75	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:14	IMR
Di-n-butylphthalate	ND	0.75	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:14	IMR
1,2-Dichlorobenzene	ND	0.75	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:14	IMR
1,3-Dichlorobenzene	ND	0.75	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:14	IMR
1,4-Dichlorobenzene	ND	0.75	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:14	IMR
3,3-Dichlorobenzidine	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:14	IMR
2,4-Dichlorophenol	ND	0.75	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:14	IMR
Diethylphthalate	ND	0.75	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:14	IMR
2,4-Dimethylphenol	ND	0.75	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:14	IMR
Dimethylphthalate	ND	0.75	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:14	IMR
2,4-Dinitrophenol	ND	1.5	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:14	IMR
2,4-Dinitrotoluene	ND	0.75	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:14	IMR
2,6-Dinitrotoluene	ND	0.75	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:14	IMR
Di-n-octylphthalate	ND	0.75	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:14	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.75	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:14	IMR
Fluoranthene	7.6	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:14	IMR
Fluorene	0.90	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:14	IMR
Hexachlorobenzene	ND	0.75	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:14	IMR
Hexachlorobutadiene	ND	0.75	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:14	IMR
Hexachloroethane	ND	0.75	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:14	IMR
Indeno(1,2,3-cd)pyrene	1.8	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:14	IMR
Isophorone	ND	0.75	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:14	IMR
2-Methylnaphthalene	0.69	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:14	IMR

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-C2 (0-5)

Sampled: 3/12/2019 10:50

Sample ID: 19C0480-14

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	0.75	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:14	IMR
3/4-Methylphenol	ND	0.75	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:14	IMR
Naphthalene	1.2	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:14	IMR
Nitrobenzene	ND	0.75	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:14	IMR
2-Nitrophenol	ND	0.75	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:14	IMR
4-Nitrophenol	ND	1.5	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:14	IMR
Pentachlorophenol	ND	0.75	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:14	IMR
Phenanthrene	8.3	0.75	mg/Kg dry	2		SW-846 8270D	3/15/19	3/20/19 11:07	BGL
Phenol	ND	0.75	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:14	IMR
Pyrene	7.1	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:14	IMR
1,2,4-Trichlorobenzene	ND	0.75	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:14	IMR
2,4,5-Trichlorophenol	ND	0.75	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:14	IMR
2,4,6-Trichlorophenol	ND	0.75	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:14	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	79.4	30-130	3/19/19 16:14
2-Fluorophenol	73.6	30-130	3/20/19 11:07
Phenol-d6	83.8	30-130	3/19/19 16:14
Phenol-d6	78.5	30-130	3/20/19 11:07
Nitrobenzene-d5	87.5	30-130	3/19/19 16:14
Nitrobenzene-d5	76.8	30-130	3/20/19 11:07
2-Fluorobiphenyl	91.9	30-130	3/19/19 16:14
2-Fluorobiphenyl	80.5	30-130	3/20/19 11:07
2,4,6-Tribromophenol	80.8	30-130	3/19/19 16:14
2,4,6-Tribromophenol	74.0	30-130	3/20/19 11:07
p-Terphenyl-d14	108	30-130	3/19/19 16:14
p-Terphenyl-d14	92.3	30-130	3/20/19 11:07

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-C2 (0-5)

Sampled: 3/12/2019 10:50

Sample ID: 19C0480-14

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 18:34	JMB
Aroclor-1221 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 18:34	JMB
Aroclor-1232 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 18:34	JMB
Aroclor-1242 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 18:34	JMB
Aroclor-1248 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 18:34	JMB
Aroclor-1254 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 18:34	JMB
Aroclor-1260 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 18:34	JMB
Aroclor-1262 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 18:34	JMB
Aroclor-1268 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 18:34	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		73.9	30-150					3/18/19 18:34	
Decachlorobiphenyl [2]		80.2	30-150					3/18/19 18:34	
Tetrachloro-m-xylene [1]		94.7	30-150					3/18/19 18:34	
Tetrachloro-m-xylene [2]		91.6	30-150					3/18/19 18:34	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-C2 (0-5)

Sampled: 3/12/2019 10:50

Sample ID: 19C0480-14

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	1200	370	mg/Kg dry	20		SW-846 8100 Modified	3/15/19	3/19/19 10:20	RMW
Surrogates	% Recovery		Recovery Limits	Flag/Qual					
2-Fluorobiphenyl	*		40-140	S-01		3/19/19 10:20			

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-C2 (0-5)

Sampled: 3/12/2019 10:50

Sample ID: 19C0480-14

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:38	QNW
Arsenic	5.1	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:38	QNW
Barium	36	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:38	QNW
Beryllium	0.34	0.19	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:38	QNW
Cadmium	0.42	0.19	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:38	QNW
Chromium	14	0.38	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:38	QNW
Lead	50	0.56	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:38	QNW
Mercury	0.073	0.026	mg/Kg dry	1		SW-846 7471B	3/13/19	3/15/19 13:09	TBC
Nickel	12	0.38	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:38	QNW
Selenium	ND	3.8	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:38	QNW
Silver	ND	0.38	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:38	QNW
Thallium	ND	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:38	QNW
Vanadium	24	0.75	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:38	QNW
Zinc	48	0.75	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 13:38	QNW



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-C2 (0-5)

Sampled: 3/12/2019 10:50

Sample ID: 19C0480-14

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	89.7		% Wt	1		SM 2540G	3/18/19	3/18/19 19:45	KMG
Ignitability	Absent		present/absent	1		SW-846 1030	3/17/19	3/17/19 12:20	KMV
pH @20.6°C	7.7		pH Units	1		SW-846 9045C	3/12/19	3/12/19 19:10	AIA
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	3/15/19	3/16/19 11:40	KMV
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	3/15/19	3/16/19 10:43	KMV
Specific conductance	8.5	2.0	µmhos/cm	1		SM21-22 2510B Modified	3/15/19	3/15/19 12:21	EC

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-C2 (5-10)

Sampled: 3/12/2019 10:55

Sample ID: 19C0480-15

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.075	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:36	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00075	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:36	MFF
Benzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:36	MFF
Bromobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:36	MFF
Bromochloromethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:36	MFF
Bromodichloromethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:36	MFF
Bromoform	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:36	MFF
Bromomethane	ND	0.0075	mg/Kg dry	1	V-34	SW-846 8260C	3/13/19	3/14/19 13:36	MFF
2-Butanone (MEK)	ND	0.030	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:36	MFF
n-Butylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:36	MFF
sec-Butylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:36	MFF
tert-Butylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:36	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00075	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:36	MFF
Carbon Disulfide	ND	0.0045	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:36	MFF
Carbon Tetrachloride	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:36	MFF
Chlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:36	MFF
Chlorodibromomethane	ND	0.00075	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:36	MFF
Chloroethane	ND	0.0075	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:36	MFF
Chloroform	ND	0.0030	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:36	MFF
Chloromethane	ND	0.0075	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:36	MFF
2-Chlorotoluene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:36	MFF
4-Chlorotoluene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:36	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:36	MFF
1,2-Dibromoethane (EDB)	ND	0.00075	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:36	MFF
Dibromomethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:36	MFF
1,2-Dichlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:36	MFF
1,3-Dichlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:36	MFF
1,4-Dichlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:36	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0075	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:36	MFF
1,1-Dichloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:36	MFF
1,2-Dichloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:36	MFF
1,1-Dichloroethylene	ND	0.0030	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:36	MFF
cis-1,2-Dichloroethylene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:36	MFF
trans-1,2-Dichloroethylene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:36	MFF
1,2-Dichloropropane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:36	MFF
1,3-Dichloropropane	ND	0.00075	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:36	MFF
2,2-Dichloropropane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:36	MFF
1,1-Dichloropropene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:36	MFF
cis-1,3-Dichloropropene	ND	0.00075	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:36	MFF
trans-1,3-Dichloropropene	ND	0.00075	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:36	MFF
Diethyl Ether	ND	0.0075	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:36	MFF
Diisopropyl Ether (DIPE)	ND	0.00075	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:36	MFF
1,4-Dioxane	ND	0.075	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:36	MFF
Ethylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:36	MFF

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-C2 (5-10)

Sampled: 3/12/2019 10:55

Sample ID: 19C0480-15

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:36	MFF
2-Hexanone (MBK)	ND	0.015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:36	MFF
Isopropylbenzene (Cumene)	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:36	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:36	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0030	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:36	MFF
Methylene Chloride	ND	0.0075	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:36	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:36	MFF
Naphthalene	ND	0.0030	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:36	MFF
n-Propylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:36	MFF
Styrene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:36	MFF
1,1,1,2-Tetrachloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:36	MFF
1,1,2,2-Tetrachloroethane	ND	0.00075	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:36	MFF
Tetrachloroethylene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:36	MFF
Tetrahydrofuran	ND	0.0075	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:36	MFF
Toluene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:36	MFF
1,2,3-Trichlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:36	MFF
1,2,4-Trichlorobenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:36	MFF
1,1,1-Trichloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:36	MFF
1,1,2-Trichloroethane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:36	MFF
Trichloroethylene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:36	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0075	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:36	MFF
1,2,3-Trichloropropane	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:36	MFF
1,2,4-Trimethylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:36	MFF
1,3,5-Trimethylbenzene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:36	MFF
Vinyl Chloride	ND	0.0075	mg/Kg dry	1	L-04	SW-846 8260C	3/13/19	3/14/19 13:36	MFF
m+p Xylene	ND	0.0030	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:36	MFF
o-Xylene	ND	0.0015	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 13:36	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	99.8	70-130	
Toluene-d8	93.0	70-130	
4-Bromofluorobenzene	96.2	70-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-C2 (5-10)

Sampled: 3/12/2019 10:55

Sample ID: 19C0480-15

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:44	IMR
Acenaphthylene	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:44	IMR
Acetophenone	ND	0.77	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:44	IMR
Aniline	ND	0.77	mg/Kg dry	1	L-04, V-34	SW-846 8270D	3/15/19	3/19/19 16:44	IMR
Anthracene	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:44	IMR
Benzo(a)anthracene	0.96	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:44	IMR
Benzo(a)pyrene	1.1	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:44	IMR
Benzo(b)fluoranthene	1.1	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:44	IMR
Benzo(g,h,i)perylene	0.76	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:44	IMR
Benzo(k)fluoranthene	0.42	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:44	IMR
Bis(2-chloroethoxy)methane	ND	0.77	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:44	IMR
Bis(2-chloroethyl)ether	ND	0.77	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:44	IMR
Bis(2-chloroisopropyl)ether	ND	0.77	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:44	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.77	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:44	IMR
4-Bromophenylphenylether	ND	0.77	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:44	IMR
Butylbenzylphthalate	ND	0.77	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:44	IMR
4-Chloroaniline	ND	1.5	mg/Kg dry	1	V-34	SW-846 8270D	3/15/19	3/19/19 16:44	IMR
2-Chloronaphthalene	ND	0.77	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:44	IMR
2-Chlorophenol	ND	0.77	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:44	IMR
Chrysene	1.1	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:44	IMR
Dibenz(a,h)anthracene	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:44	IMR
Dibenzofuran	ND	0.77	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:44	IMR
Di-n-butylphthalate	ND	0.77	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:44	IMR
1,2-Dichlorobenzene	ND	0.77	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:44	IMR
1,3-Dichlorobenzene	ND	0.77	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:44	IMR
1,4-Dichlorobenzene	ND	0.77	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:44	IMR
3,3-Dichlorobenzidine	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:44	IMR
2,4-Dichlorophenol	ND	0.77	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:44	IMR
Diethylphthalate	ND	0.77	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:44	IMR
2,4-Dimethylphenol	ND	0.77	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:44	IMR
Dimethylphthalate	ND	0.77	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:44	IMR
2,4-Dinitrophenol	ND	1.5	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:44	IMR
2,4-Dinitrotoluene	ND	0.77	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:44	IMR
2,6-Dinitrotoluene	ND	0.77	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:44	IMR
Di-n-octylphthalate	ND	0.77	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:44	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.77	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:44	IMR
Fluoranthene	1.5	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:44	IMR
Fluorene	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:44	IMR
Hexachlorobenzene	ND	0.77	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:44	IMR
Hexachlorobutadiene	ND	0.77	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:44	IMR
Hexachloroethane	ND	0.77	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:44	IMR
Indeno(1,2,3-cd)pyrene	0.73	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:44	IMR
Isophorone	ND	0.77	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:44	IMR
2-Methylnaphthalene	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:44	IMR

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-C2 (5-10)

Sampled: 3/12/2019 10:55

Sample ID: 19C0480-15

Sample Matrix: Soil

Sample Flags: RL-08

**Semivolatile Organic Compounds by GC/MS**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	0.77	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:44	IMR
3/4-Methylphenol	ND	0.77	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:44	IMR
Naphthalene	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:44	IMR
Nitrobenzene	ND	0.77	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:44	IMR
2-Nitrophenol	ND	0.77	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:44	IMR
4-Nitrophenol	ND	1.5	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:44	IMR
Pentachlorophenol	ND	0.77	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:44	IMR
Phenanthrene	0.65	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:44	IMR
Phenol	ND	0.77	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:44	IMR
Pyrene	2.2	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:44	IMR
1,2,4-Trichlorobenzene	ND	0.77	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:44	IMR
2,4,5-Trichlorophenol	ND	0.77	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:44	IMR
2,4,6-Trichlorophenol	ND	0.77	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 16:44	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	90.6	30-130	3/19/19 16:44
Phenol-d6	89.5	30-130	3/19/19 16:44
Nitrobenzene-d5	88.5	30-130	3/19/19 16:44
2-Fluorobiphenyl	90.0	30-130	3/19/19 16:44
2,4,6-Tribromophenol	96.2	30-130	3/19/19 16:44
p-Terphenyl-d14	106	30-130	3/19/19 16:44

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-C2 (5-10)

Sampled: 3/12/2019 10:55

Sample ID: 19C0480-15

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 18:52	JMB
Aroclor-1221 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 18:52	JMB
Aroclor-1232 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 18:52	JMB
Aroclor-1242 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 18:52	JMB
Aroclor-1248 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 18:52	JMB
Aroclor-1254 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 18:52	JMB
Aroclor-1260 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 18:52	JMB
Aroclor-1262 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 18:52	JMB
Aroclor-1268 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 18:52	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		79.3	30-150					3/18/19 18:52	
Decachlorobiphenyl [2]		86.0	30-150					3/18/19 18:52	
Tetrachloro-m-xylene [1]		106	30-150					3/18/19 18:52	
Tetrachloro-m-xylene [2]		101	30-150					3/18/19 18:52	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-C2 (5-10)

Sampled: 3/12/2019 10:55

Sample ID: 19C0480-15

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	930	380	mg/Kg dry	20		SW-846 8100 Modified	3/15/19	3/19/19 10:40	RMW
<b>Surrogates</b>		<b>% Recovery</b>	<b>Recovery Limits</b>		<b>Flag/Qual</b>				
2-Fluorobiphenyl		*	40-140		S-01			3/19/19 10:40	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-C2 (5-10)

Sampled: 3/12/2019 10:55

Sample ID: 19C0480-15

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 15:37	QNW
Arsenic	5.5	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 15:37	QNW
Barium	31	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 15:37	QNW
Beryllium	0.32	0.19	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 15:37	QNW
Cadmium	0.42	0.19	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 15:37	QNW
Chromium	17	0.37	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 15:37	QNW
Lead	37	0.56	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 15:37	QNW
Mercury	0.033	0.028	mg/Kg dry	1		SW-846 7471B	3/13/19	3/15/19 13:11	TBC
Nickel	11	0.37	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 15:37	QNW
Selenium	ND	3.7	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 15:37	QNW
Silver	ND	0.37	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 15:37	QNW
Thallium	ND	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 15:37	QNW
Vanadium	20	0.74	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 15:37	QNW
Zinc	46	0.74	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 15:37	QNW



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-C2 (5-10)

Sampled: 3/12/2019 10:55

Sample ID: 19C0480-15

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	87.7		% Wt	1		SM 2540G	3/18/19	3/18/19 19:45	KMG
Ignitability	Absent		present/absent	1		SW-846 1030	3/17/19	3/17/19 12:20	KMV
pH @19.9°C	7.3		pH Units	1		SW-846 9045C	3/12/19	3/12/19 19:10	AIA
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	3/15/19	3/16/19 11:40	KMV
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	3/15/19	3/16/19 10:43	KMV
Specific conductance	9.8	2.0	µmhos/cm	1		SM21-22 2510B Modified	3/15/19	3/15/19 12:21	EC

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-D1 (0-5)

Sampled: 3/12/2019 11:45

Sample ID: 19C0480-16

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.093	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:02	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00093	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:02	MFF
Benzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:02	MFF
Bromobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:02	MFF
Bromochloromethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:02	MFF
Bromodichloromethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:02	MFF
Bromoform	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:02	MFF
Bromomethane	ND	0.0093	mg/Kg dry	1	V-34	SW-846 8260C	3/13/19	3/14/19 14:02	MFF
2-Butanone (MEK)	ND	0.037	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:02	MFF
n-Butylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:02	MFF
sec-Butylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:02	MFF
tert-Butylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:02	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00093	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:02	MFF
Carbon Disulfide	ND	0.0056	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:02	MFF
Carbon Tetrachloride	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:02	MFF
Chlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:02	MFF
Chlorodibromomethane	ND	0.00093	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:02	MFF
Chloroethane	ND	0.0093	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:02	MFF
Chloroform	ND	0.0037	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:02	MFF
Chloromethane	ND	0.0093	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:02	MFF
2-Chlorotoluene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:02	MFF
4-Chlorotoluene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:02	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:02	MFF
1,2-Dibromoethane (EDB)	ND	0.00093	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:02	MFF
Dibromomethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:02	MFF
1,2-Dichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:02	MFF
1,3-Dichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:02	MFF
1,4-Dichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:02	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0093	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:02	MFF
1,1-Dichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:02	MFF
1,2-Dichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:02	MFF
1,1-Dichloroethylene	ND	0.0037	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:02	MFF
cis-1,2-Dichloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:02	MFF
trans-1,2-Dichloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:02	MFF
1,2-Dichloropropane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:02	MFF
1,3-Dichloropropane	ND	0.00093	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:02	MFF
2,2-Dichloropropane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:02	MFF
1,1-Dichloropropene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:02	MFF
cis-1,3-Dichloropropene	ND	0.00093	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:02	MFF
trans-1,3-Dichloropropene	ND	0.00093	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:02	MFF
Diethyl Ether	ND	0.0093	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:02	MFF
Diisopropyl Ether (DIPE)	ND	0.00093	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:02	MFF
1,4-Dioxane	ND	0.093	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:02	MFF
Ethylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:02	MFF

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-D1 (0-5)

Sampled: 3/12/2019 11:45

Sample ID: 19C0480-16

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:02	MFF
2-Hexanone (MBK)	ND	0.019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:02	MFF
Isopropylbenzene (Cumene)	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:02	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:02	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0037	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:02	MFF
Methylene Chloride	ND	0.0093	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:02	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:02	MFF
Naphthalene	ND	0.0037	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:02	MFF
n-Propylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:02	MFF
Styrene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:02	MFF
1,1,1,2-Tetrachloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:02	MFF
1,1,2,2-Tetrachloroethane	ND	0.00093	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:02	MFF
Tetrachloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:02	MFF
Tetrahydrofuran	ND	0.0093	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:02	MFF
Toluene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:02	MFF
1,2,3-Trichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:02	MFF
1,2,4-Trichlorobenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:02	MFF
1,1,1-Trichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:02	MFF
1,1,2-Trichloroethane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:02	MFF
Trichloroethylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:02	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0093	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:02	MFF
1,2,3-Trichloropropane	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:02	MFF
1,2,4-Trimethylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:02	MFF
1,3,5-Trimethylbenzene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:02	MFF
Vinyl Chloride	ND	0.0093	mg/Kg dry	1	L-04	SW-846 8260C	3/13/19	3/14/19 14:02	MFF
m+p Xylene	ND	0.0037	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:02	MFF
o-Xylene	ND	0.0019	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:02	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	104	70-130	
Toluene-d8	93.4	70-130	
4-Bromofluorobenzene	96.8	70-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-D1 (0-5)

Sampled: 3/12/2019 11:45

Sample ID: 19C0480-16

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatle Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.41	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:12	IMR
Acenaphthylene	0.49	0.41	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:12	IMR
Acetophenone	ND	0.82	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:12	IMR
Aniline	ND	0.82	mg/Kg dry	1	L-04, V-34	SW-846 8270D	3/15/19	3/19/19 17:12	IMR
Anthracene	1.4	0.41	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:12	IMR
Benzo(a)anthracene	2.8	0.41	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:12	IMR
Benzo(a)pyrene	2.7	0.41	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:12	IMR
Benzo(b)fluoranthene	3.2	0.41	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:12	IMR
Benzo(g,h,i)perylene	1.5	0.41	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:12	IMR
Benzo(k)fluoranthene	1.2	0.41	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:12	IMR
Bis(2-chloroethoxy)methane	ND	0.82	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:12	IMR
Bis(2-chloroethyl)ether	ND	0.82	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:12	IMR
Bis(2-chloroisopropyl)ether	ND	0.82	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:12	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.82	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:12	IMR
4-Bromophenylphenylether	ND	0.82	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:12	IMR
Butylbenzylphthalate	ND	0.82	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:12	IMR
4-Chloroaniline	ND	1.6	mg/Kg dry	1	V-34	SW-846 8270D	3/15/19	3/19/19 17:12	IMR
2-Chloronaphthalene	ND	0.82	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:12	IMR
2-Chlorophenol	ND	0.82	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:12	IMR
Chrysene	2.9	0.41	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:12	IMR
Dibenz(a,h)anthracene	ND	0.41	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:12	IMR
Dibenzofuran	ND	0.82	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:12	IMR
Di-n-butylphthalate	ND	0.82	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:12	IMR
1,2-Dichlorobenzene	ND	0.82	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:12	IMR
1,3-Dichlorobenzene	ND	0.82	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:12	IMR
1,4-Dichlorobenzene	ND	0.82	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:12	IMR
3,3-Dichlorobenzidine	ND	0.41	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:12	IMR
2,4-Dichlorophenol	ND	0.82	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:12	IMR
Diethylphthalate	ND	0.82	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:12	IMR
2,4-Dimethylphenol	ND	0.82	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:12	IMR
Dimethylphthalate	ND	0.82	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:12	IMR
2,4-Dinitrophenol	ND	1.6	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:12	IMR
2,4-Dinitrotoluene	ND	0.82	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:12	IMR
2,6-Dinitrotoluene	ND	0.82	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:12	IMR
Di-n-octylphthalate	ND	0.82	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:12	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.82	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:12	IMR
Fluoranthene	5.7	0.41	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:12	IMR
Fluorene	ND	0.41	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:12	IMR
Hexachlorobenzene	ND	0.82	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:12	IMR
Hexachlorobutadiene	ND	0.82	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:12	IMR
Hexachloroethane	ND	0.82	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:12	IMR
Indeno(1,2,3-cd)pyrene	1.7	0.41	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:12	IMR
Isophorone	ND	0.82	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:12	IMR
2-Methylnaphthalene	ND	0.41	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:12	IMR

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-D1 (0-5)

Sampled: 3/12/2019 11:45

Sample ID: 19C0480-16

Sample Matrix: Soil

Sample Flags: RL-08

**Semivolatile Organic Compounds by GC/MS**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	0.82	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:12	IMR
3/4-Methylphenol	ND	0.82	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:12	IMR
Naphthalene	ND	0.41	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:12	IMR
Nitrobenzene	ND	0.82	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:12	IMR
2-Nitrophenol	ND	0.82	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:12	IMR
4-Nitrophenol	ND	1.6	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:12	IMR
Pentachlorophenol	ND	0.82	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:12	IMR
Phenanthrene	2.4	0.41	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:12	IMR
Phenol	ND	0.82	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:12	IMR
Pyrene	6.0	0.41	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:12	IMR
1,2,4-Trichlorobenzene	ND	0.82	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:12	IMR
2,4,5-Trichlorophenol	ND	0.82	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:12	IMR
2,4,6-Trichlorophenol	ND	0.82	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:12	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	82.5	30-130	
Phenol-d6	82.6	30-130	
Nitrobenzene-d5	81.5	30-130	
2-Fluorobiphenyl	88.4	30-130	
2,4,6-Tribromophenol	92.0	30-130	
p-Terphenyl-d14	107	30-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-D1 (0-5)

Sampled: 3/12/2019 11:45

Sample ID: 19C0480-16

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.098	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 19:09	JMB
Aroclor-1221 [1]	ND	0.098	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 19:09	JMB
Aroclor-1232 [1]	ND	0.098	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 19:09	JMB
Aroclor-1242 [1]	ND	0.098	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 19:09	JMB
Aroclor-1248 [1]	ND	0.098	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 19:09	JMB
Aroclor-1254 [1]	ND	0.098	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 19:09	JMB
Aroclor-1260 [1]	ND	0.098	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 19:09	JMB
Aroclor-1262 [1]	ND	0.098	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 19:09	JMB
Aroclor-1268 [1]	ND	0.098	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 19:09	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		77.8	30-150					3/18/19 19:09	
Decachlorobiphenyl [2]		84.8	30-150					3/18/19 19:09	
Tetrachloro-m-xylene [1]		103	30-150					3/18/19 19:09	
Tetrachloro-m-xylene [2]		99.3	30-150					3/18/19 19:09	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-D1 (0-5)

Sampled: 3/12/2019 11:45

Sample ID: 19C0480-16

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	1200	400	mg/Kg dry	20		SW-846 8100 Modified	3/15/19	3/19/19 11:00	RMW
<b>Surrogates</b>		<b>% Recovery</b>	<b>Recovery Limits</b>		<b>Flag/Qual</b>				
2-Fluorobiphenyl		*	40-140		S-01			3/19/19 11:00	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-D1 (0-5)

Sampled: 3/12/2019 11:45

Sample ID: 19C0480-16

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	2.0	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 15:42	QNW
Arsenic	3.4	2.0	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 15:42	QNW
Barium	32	2.0	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 15:42	QNW
Beryllium	0.40	0.20	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 15:42	QNW
Cadmium	0.29	0.20	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 15:42	QNW
Chromium	17	0.41	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 15:42	QNW
Lead	40	0.61	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 15:42	QNW
Mercury	0.055	0.031	mg/Kg dry	1		SW-846 7471B	3/13/19	3/15/19 13:12	TBC
Nickel	15	0.41	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 15:42	QNW
Selenium	ND	4.1	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 15:42	QNW
Silver	ND	0.41	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 15:42	QNW
Thallium	ND	2.0	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 15:42	QNW
Vanadium	27	0.81	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 15:42	QNW
Zinc	52	0.81	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 15:42	QNW



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Sampled: 3/12/2019 11:45

Field Sample #: TP-D1 (0-5)

Sample ID: 19C0480-16

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	81.8		% Wt	1		SM 2540G	3/18/19	3/18/19 19:50	KMG
Ignitability	Absent		present/absent	1		SW-846 1030	3/17/19	3/17/19 12:20	KMV
pH @19.9°C	7.9		pH Units	1		SW-846 9045C	3/12/19	3/12/19 19:10	AIA
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	3/15/19	3/16/19 11:40	KMV
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	3/15/19	3/16/19 10:43	KMV
Specific conductance	13	2.0	µmhos/cm	1		SM21-22 2510B Modified	3/15/19	3/15/19 12:21	EC

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-D1 (5-10)

Sampled: 3/12/2019 11:50

Sample ID: 19C0480-17

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.087	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:27	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00087	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:27	MFF
Benzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:27	MFF
Bromobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:27	MFF
Bromochloromethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:27	MFF
Bromodichloromethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:27	MFF
Bromoform	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:27	MFF
Bromomethane	ND	0.0087	mg/Kg dry	1	V-34	SW-846 8260C	3/13/19	3/14/19 14:27	MFF
2-Butanone (MEK)	ND	0.035	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:27	MFF
n-Butylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:27	MFF
sec-Butylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:27	MFF
tert-Butylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:27	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00087	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:27	MFF
Carbon Disulfide	ND	0.0052	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:27	MFF
Carbon Tetrachloride	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:27	MFF
Chlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:27	MFF
Chlorodibromomethane	ND	0.00087	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:27	MFF
Chloroethane	ND	0.0087	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:27	MFF
Chloroform	ND	0.0035	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:27	MFF
Chloromethane	ND	0.0087	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:27	MFF
2-Chlorotoluene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:27	MFF
4-Chlorotoluene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:27	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:27	MFF
1,2-Dibromoethane (EDB)	ND	0.00087	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:27	MFF
Dibromomethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:27	MFF
1,2-Dichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:27	MFF
1,3-Dichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:27	MFF
1,4-Dichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:27	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0087	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:27	MFF
1,1-Dichloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:27	MFF
1,2-Dichloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:27	MFF
1,1-Dichloroethylene	ND	0.0035	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:27	MFF
cis-1,2-Dichloroethylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:27	MFF
trans-1,2-Dichloroethylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:27	MFF
1,2-Dichloropropane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:27	MFF
1,3-Dichloropropane	ND	0.00087	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:27	MFF
2,2-Dichloropropane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:27	MFF
1,1-Dichloropropene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:27	MFF
cis-1,3-Dichloropropene	ND	0.00087	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:27	MFF
trans-1,3-Dichloropropene	ND	0.00087	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:27	MFF
Diethyl Ether	ND	0.0087	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:27	MFF
Diisopropyl Ether (DIPE)	ND	0.00087	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:27	MFF
1,4-Dioxane	ND	0.087	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:27	MFF
Ethylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:27	MFF

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-D1 (5-10)

Sampled: 3/12/2019 11:50

Sample ID: 19C0480-17

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:27	MFF
2-Hexanone (MBK)	ND	0.017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:27	MFF
Isopropylbenzene (Cumene)	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:27	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:27	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0035	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:27	MFF
Methylene Chloride	ND	0.0087	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:27	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:27	MFF
Naphthalene	ND	0.0035	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:27	MFF
n-Propylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:27	MFF
Styrene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:27	MFF
1,1,1,2-Tetrachloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:27	MFF
1,1,2,2-Tetrachloroethane	ND	0.00087	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:27	MFF
Tetrachloroethylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:27	MFF
Tetrahydrofuran	ND	0.0087	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:27	MFF
Toluene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:27	MFF
1,2,3-Trichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:27	MFF
1,2,4-Trichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:27	MFF
1,1,1-Trichloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:27	MFF
1,1,2-Trichloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:27	MFF
Trichloroethylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:27	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0087	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:27	MFF
1,2,3-Trichloropropane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:27	MFF
1,2,4-Trimethylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:27	MFF
1,3,5-Trimethylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:27	MFF
Vinyl Chloride	ND	0.0087	mg/Kg dry	1	L-04	SW-846 8260C	3/13/19	3/14/19 14:27	MFF
m+p Xylene	ND	0.0035	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:27	MFF
o-Xylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:27	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	99.1	70-130	
Toluene-d8	94.1	70-130	
4-Bromofluorobenzene	95.5	70-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-D1 (5-10)

Sampled: 3/12/2019 11:50

Sample ID: 19C0480-17

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:41	IMR
Acenaphthylene	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:41	IMR
Acetophenone	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:41	IMR
Aniline	ND	0.76	mg/Kg dry	1	L-04, V-34	SW-846 8270D	3/15/19	3/19/19 17:41	IMR
Anthracene	0.55	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:41	IMR
Benzo(a)anthracene	2.0	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:41	IMR
Benzo(a)pyrene	2.2	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:41	IMR
Benzo(b)fluoranthene	2.5	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:41	IMR
Benzo(g,h,i)perylene	1.0	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:41	IMR
Benzo(k)fluoranthene	0.88	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:41	IMR
Bis(2-chloroethoxy)methane	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:41	IMR
Bis(2-chloroethyl)ether	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:41	IMR
Bis(2-chloroisopropyl)ether	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:41	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:41	IMR
4-Bromophenylphenylether	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:41	IMR
Butylbenzylphthalate	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:41	IMR
4-Chloroaniline	ND	1.5	mg/Kg dry	1	V-34	SW-846 8270D	3/15/19	3/19/19 17:41	IMR
2-Chloronaphthalene	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:41	IMR
2-Chlorophenol	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:41	IMR
Chrysene	1.9	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:41	IMR
Dibenz(a,h)anthracene	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:41	IMR
Dibenzofuran	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:41	IMR
Di-n-butylphthalate	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:41	IMR
1,2-Dichlorobenzene	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:41	IMR
1,3-Dichlorobenzene	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:41	IMR
1,4-Dichlorobenzene	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:41	IMR
3,3-Dichlorobenzidine	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:41	IMR
2,4-Dichlorophenol	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:41	IMR
Diethylphthalate	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:41	IMR
2,4-Dimethylphenol	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:41	IMR
Dimethylphthalate	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:41	IMR
2,4-Dinitrophenol	ND	1.5	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:41	IMR
2,4-Dinitrotoluene	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:41	IMR
2,6-Dinitrotoluene	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:41	IMR
Di-n-octylphthalate	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:41	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:41	IMR
Fluoranthene	3.7	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:41	IMR
Fluorene	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:41	IMR
Hexachlorobenzene	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:41	IMR
Hexachlorobutadiene	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:41	IMR
Hexachloroethane	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:41	IMR
Indeno(1,2,3-cd)pyrene	1.1	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:41	IMR
Isophorone	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:41	IMR
2-Methylnaphthalene	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:41	IMR

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-D1 (5-10)

Sampled: 3/12/2019 11:50

Sample ID: 19C0480-17

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:41	IMR
3/4-Methylphenol	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:41	IMR
Naphthalene	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:41	IMR
Nitrobenzene	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:41	IMR
2-Nitrophenol	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:41	IMR
4-Nitrophenol	ND	1.5	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:41	IMR
Pentachlorophenol	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:41	IMR
Phenanthrene	1.9	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:41	IMR
Phenol	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:41	IMR
Pyrene	4.0	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:41	IMR
1,2,4-Trichlorobenzene	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:41	IMR
2,4,5-Trichlorophenol	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:41	IMR
2,4,6-Trichlorophenol	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 17:41	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	89.9	30-130	
Phenol-d6	89.1	30-130	
Nitrobenzene-d5	88.8	30-130	
2-Fluorobiphenyl	97.0	30-130	
2,4,6-Tribromophenol	101	30-130	
p-Terphenyl-d14	116	30-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-D1 (5-10)

Sampled: 3/12/2019 11:50

Sample ID: 19C0480-17

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 19:27	JMB
Aroclor-1221 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 19:27	JMB
Aroclor-1232 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 19:27	JMB
Aroclor-1242 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 19:27	JMB
Aroclor-1248 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 19:27	JMB
Aroclor-1254 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 19:27	JMB
Aroclor-1260 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 19:27	JMB
Aroclor-1262 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 19:27	JMB
Aroclor-1268 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 19:27	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		75.1	30-150					3/18/19 19:27	
Decachlorobiphenyl [2]		85.1	30-150					3/18/19 19:27	
Tetrachloro-m-xylene [1]		97.7	30-150					3/18/19 19:27	
Tetrachloro-m-xylene [2]		92.9	30-150					3/18/19 19:27	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-D1 (5-10)

Sampled: 3/12/2019 11:50

Sample ID: 19C0480-17

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	910	370	mg/Kg dry	20		SW-846 8100 Modified	3/15/19	3/19/19 11:20	RMW
<b>Surrogates</b>		<b>% Recovery</b>	<b>Recovery Limits</b>		<b>Flag/Qual</b>				
2-Fluorobiphenyl		*	40-140		S-01			3/19/19 11:20	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-D1 (5-10)

Sampled: 3/12/2019 11:50

Sample ID: 19C0480-17

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 15:47	QNW
Arsenic	4.6	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 15:47	QNW
Barium	31	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 15:47	QNW
Beryllium	0.33	0.19	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 15:47	QNW
Cadmium	0.31	0.19	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 15:47	QNW
Chromium	15	0.37	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 15:47	QNW
Lead	47	0.56	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 15:47	QNW
Mercury	0.059	0.026	mg/Kg dry	1		SW-846 7471B	3/13/19	3/15/19 13:14	TBC
Nickel	12	0.37	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 15:47	QNW
Selenium	ND	3.7	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 15:47	QNW
Silver	ND	0.37	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 15:47	QNW
Thallium	ND	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 15:47	QNW
Vanadium	25	0.74	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 15:47	QNW
Zinc	46	0.74	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 15:47	QNW



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

Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-D1 (5-10)

Sampled: 3/12/2019 11:50

Sample ID: 19C0480-17

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	89.1		% Wt	1		SM 2540G	3/18/19	3/18/19 19:50	KMG
Ignitability	Absent		present/absent	1		SW-846 1030	3/17/19	3/17/19 12:20	KMV
pH @20°C	7.9		pH Units	1		SW-846 9045C	3/12/19	3/12/19 19:10	AIA
Reactive Cyanide	ND	4.0	mg/Kg	1		SW-846 9014	3/15/19	3/16/19 11:40	KMV
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	3/15/19	3/16/19 10:43	KMV
Specific conductance	11	2.0	µmhos/cm	1		SM21-22 2510B Modified	3/15/19	3/15/19 12:21	EC

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-C1 (0-5)

Sampled: 3/12/2019 12:10

Sample ID: 19C0480-18

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.10	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:51	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.0010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:51	MFF
Benzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:51	MFF
Bromobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:51	MFF
Bromochloromethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:51	MFF
Bromodichloromethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:51	MFF
Bromoform	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:51	MFF
Bromomethane	ND	0.010	mg/Kg dry	1	V-34	SW-846 8260C	3/13/19	3/14/19 14:51	MFF
2-Butanone (MEK)	ND	0.040	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:51	MFF
n-Butylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:51	MFF
sec-Butylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:51	MFF
tert-Butylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:51	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.0010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:51	MFF
Carbon Disulfide	ND	0.0060	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:51	MFF
Carbon Tetrachloride	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:51	MFF
Chlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:51	MFF
Chlorodibromomethane	ND	0.0010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:51	MFF
Chloroethane	ND	0.010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:51	MFF
Chloroform	ND	0.0040	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:51	MFF
Chloromethane	ND	0.010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:51	MFF
2-Chlorotoluene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:51	MFF
4-Chlorotoluene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:51	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:51	MFF
1,2-Dibromoethane (EDB)	ND	0.0010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:51	MFF
Dibromomethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:51	MFF
1,2-Dichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:51	MFF
1,3-Dichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:51	MFF
1,4-Dichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:51	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:51	MFF
1,1-Dichloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:51	MFF
1,2-Dichloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:51	MFF
1,1-Dichloroethylene	ND	0.0040	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:51	MFF
cis-1,2-Dichloroethylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:51	MFF
trans-1,2-Dichloroethylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:51	MFF
1,2-Dichloropropane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:51	MFF
1,3-Dichloropropane	ND	0.0010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:51	MFF
2,2-Dichloropropane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:51	MFF
1,1-Dichloropropene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:51	MFF
cis-1,3-Dichloropropene	ND	0.0010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:51	MFF
trans-1,3-Dichloropropene	ND	0.0010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:51	MFF
Diethyl Ether	ND	0.010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:51	MFF
Diisopropyl Ether (DIPE)	ND	0.0010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:51	MFF
1,4-Dioxane	ND	0.10	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:51	MFF
Ethylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:51	MFF

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-C1 (0-5)

Sampled: 3/12/2019 12:10

Sample ID: 19C0480-18

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:51	MFF
2-Hexanone (MBK)	ND	0.020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:51	MFF
Isopropylbenzene (Cumene)	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:51	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:51	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0040	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:51	MFF
Methylene Chloride	ND	0.010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:51	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:51	MFF
Naphthalene	ND	0.0040	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:51	MFF
n-Propylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:51	MFF
Styrene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:51	MFF
1,1,1,2-Tetrachloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:51	MFF
1,1,2,2-Tetrachloroethane	ND	0.0010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:51	MFF
Tetrachloroethylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:51	MFF
Tetrahydrofuran	ND	0.010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:51	MFF
Toluene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:51	MFF
1,2,3-Trichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:51	MFF
1,2,4-Trichlorobenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:51	MFF
1,1,1-Trichloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:51	MFF
1,1,2-Trichloroethane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:51	MFF
Trichloroethylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:51	MFF
Trichlorofluoromethane (Freon 11)	ND	0.010	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:51	MFF
1,2,3-Trichloropropane	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:51	MFF
1,2,4-Trimethylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:51	MFF
1,3,5-Trimethylbenzene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:51	MFF
Vinyl Chloride	ND	0.010	mg/Kg dry	1	L-04	SW-846 8260C	3/13/19	3/14/19 14:51	MFF
m+p Xylene	ND	0.0040	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:51	MFF
o-Xylene	ND	0.0020	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 14:51	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	101	70-130	
Toluene-d8	93.6	70-130	
4-Bromofluorobenzene	94.3	70-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-C1 (0-5)

Sampled: 3/12/2019 12:10

Sample ID: 19C0480-18

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatle Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:09	IMR
Acenaphthylene	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:09	IMR
Acetophenone	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:09	IMR
Aniline	ND	0.78	mg/Kg dry	1	L-04, V-34	SW-846 8270D	3/15/19	3/19/19 18:09	IMR
Anthracene	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:09	IMR
Benzo(a)anthracene	1.1	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:09	IMR
Benzo(a)pyrene	1.3	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:09	IMR
Benzo(b)fluoranthene	1.5	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:09	IMR
Benzo(g,h,i)perylene	0.72	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:09	IMR
Benzo(k)fluoranthene	0.57	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:09	IMR
Bis(2-chloroethoxy)methane	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:09	IMR
Bis(2-chloroethyl)ether	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:09	IMR
Bis(2-chloroisopropyl)ether	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:09	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:09	IMR
4-Bromophenylphenylether	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:09	IMR
Butylbenzylphthalate	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:09	IMR
4-Chloroaniline	ND	1.5	mg/Kg dry	1	V-34	SW-846 8270D	3/15/19	3/19/19 18:09	IMR
2-Chloronaphthalene	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:09	IMR
2-Chlorophenol	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:09	IMR
Chrysene	1.2	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:09	IMR
Dibenz(a,h)anthracene	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:09	IMR
Dibenzofuran	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:09	IMR
Di-n-butylphthalate	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:09	IMR
1,2-Dichlorobenzene	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:09	IMR
1,3-Dichlorobenzene	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:09	IMR
1,4-Dichlorobenzene	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:09	IMR
3,3-Dichlorobenzidine	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:09	IMR
2,4-Dichlorophenol	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:09	IMR
Diethylphthalate	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:09	IMR
2,4-Dimethylphenol	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:09	IMR
Dimethylphthalate	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:09	IMR
2,4-Dinitrophenol	ND	1.5	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:09	IMR
2,4-Dinitrotoluene	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:09	IMR
2,6-Dinitrotoluene	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:09	IMR
Di-n-octylphthalate	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:09	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:09	IMR
Fluoranthene	1.9	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:09	IMR
Fluorene	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:09	IMR
Hexachlorobenzene	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:09	IMR
Hexachlorobutadiene	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:09	IMR
Hexachloroethane	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:09	IMR
Indeno(1,2,3-cd)pyrene	0.67	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:09	IMR
Isophorone	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:09	IMR
2-Methylnaphthalene	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:09	IMR

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-C1 (0-5)

Sampled: 3/12/2019 12:10

Sample ID: 19C0480-18

Sample Matrix: Soil

Sample Flags: RL-08

**Semivolatile Organic Compounds by GC/MS**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:09	IMR
3/4-Methylphenol	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:09	IMR
Naphthalene	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:09	IMR
Nitrobenzene	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:09	IMR
2-Nitrophenol	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:09	IMR
4-Nitrophenol	ND	1.5	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:09	IMR
Pentachlorophenol	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:09	IMR
Phenanthrene	0.99	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:09	IMR
Phenol	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:09	IMR
Pyrene	2.4	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:09	IMR
1,2,4-Trichlorobenzene	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:09	IMR
2,4,5-Trichlorophenol	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:09	IMR
2,4,6-Trichlorophenol	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:09	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	82.8	30-130	
Phenol-d6	82.8	30-130	
Nitrobenzene-d5	81.6	30-130	
2-Fluorobiphenyl	86.3	30-130	
2,4,6-Tribromophenol	90.9	30-130	
p-Terphenyl-d14	106	30-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-C1 (0-5)

Sampled: 3/12/2019 12:10

Sample ID: 19C0480-18

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.092	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 19:44	JMB
Aroclor-1221 [1]	ND	0.092	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 19:44	JMB
Aroclor-1232 [1]	ND	0.092	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 19:44	JMB
Aroclor-1242 [1]	ND	0.092	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 19:44	JMB
Aroclor-1248 [1]	ND	0.092	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 19:44	JMB
Aroclor-1254 [1]	ND	0.092	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 19:44	JMB
Aroclor-1260 [1]	ND	0.092	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 19:44	JMB
Aroclor-1262 [1]	ND	0.092	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 19:44	JMB
Aroclor-1268 [1]	ND	0.092	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 19:44	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		83.0	30-150					3/18/19 19:44	
Decachlorobiphenyl [2]		90.9	30-150					3/18/19 19:44	
Tetrachloro-m-xylene [1]		108	30-150					3/18/19 19:44	
Tetrachloro-m-xylene [2]		104	30-150					3/18/19 19:44	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-C1 (0-5)

Sampled: 3/12/2019 12:10

Sample ID: 19C0480-18

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	900	190	mg/Kg dry	10		SW-846 8100 Modified	3/15/19	3/19/19 13:30	RMW
<b>Surrogates</b>		<b>% Recovery</b>	<b>Recovery Limits</b>		<b>Flag/Qual</b>				
2-Fluorobiphenyl		61.3	40-140					3/19/19 13:30	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-C1 (0-5)

Sampled: 3/12/2019 12:10

Sample ID: 19C0480-18

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 15:52	QNW
Arsenic	4.9	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 15:52	QNW
Barium	33	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 15:52	QNW
Beryllium	0.37	0.19	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 15:52	QNW
Cadmium	0.37	0.19	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 15:52	QNW
Chromium	16	0.38	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 15:52	QNW
Lead	63	0.57	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 15:52	QNW
Mercury	0.057	0.027	mg/Kg dry	1		SW-846 7471B	3/13/19	3/15/19 13:16	TBC
Nickel	12	0.38	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 15:52	QNW
Selenium	ND	3.8	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 15:52	QNW
Silver	0.84	0.38	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 15:52	QNW
Thallium	ND	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 15:52	QNW
Vanadium	23	0.76	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 15:52	QNW
Zinc	52	0.76	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 15:52	QNW



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-C1 (0-5)

Sampled: 3/12/2019 12:10

Sample ID: 19C0480-18

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	87.1		% Wt	1		SM 2540G	3/18/19	3/18/19 19:50	KMG
Ignitability	Absent		present/absent	1		SW-846 1030	3/17/19	3/17/19 12:20	KMV
pH @20.2°C	7.5		pH Units	1		SW-846 9045C	3/12/19	3/12/19 19:10	AIA
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	3/15/19	3/16/19 11:40	KMV
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	3/15/19	3/16/19 10:43	KMV
Specific conductance	12	2.0	µmhos/cm	1		SM21-22 2510B Modified	3/15/19	3/15/19 12:21	EC

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-C1 (5-10)

Sampled: 3/12/2019 12:15

Sample ID: 19C0480-19

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.084	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:16	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00084	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:16	MFF
Benzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:16	MFF
Bromobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:16	MFF
Bromochloromethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:16	MFF
Bromodichloromethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:16	MFF
Bromoform	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:16	MFF
Bromomethane	ND	0.0084	mg/Kg dry	1	V-34	SW-846 8260C	3/13/19	3/14/19 15:16	MFF
2-Butanone (MEK)	ND	0.033	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:16	MFF
n-Butylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:16	MFF
sec-Butylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:16	MFF
tert-Butylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:16	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00084	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:16	MFF
Carbon Disulfide	ND	0.0050	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:16	MFF
Carbon Tetrachloride	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:16	MFF
Chlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:16	MFF
Chlorodibromomethane	ND	0.00084	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:16	MFF
Chloroethane	ND	0.0084	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:16	MFF
Chloroform	ND	0.0033	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:16	MFF
Chloromethane	ND	0.0084	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:16	MFF
2-Chlorotoluene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:16	MFF
4-Chlorotoluene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:16	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:16	MFF
1,2-Dibromoethane (EDB)	ND	0.00084	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:16	MFF
Dibromomethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:16	MFF
1,2-Dichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:16	MFF
1,3-Dichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:16	MFF
1,4-Dichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:16	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0084	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:16	MFF
1,1-Dichloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:16	MFF
1,2-Dichloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:16	MFF
1,1-Dichloroethylene	ND	0.0033	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:16	MFF
cis-1,2-Dichloroethylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:16	MFF
trans-1,2-Dichloroethylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:16	MFF
1,2-Dichloropropane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:16	MFF
1,3-Dichloropropane	ND	0.00084	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:16	MFF
2,2-Dichloropropane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:16	MFF
1,1-Dichloropropene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:16	MFF
cis-1,3-Dichloropropene	ND	0.00084	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:16	MFF
trans-1,3-Dichloropropene	ND	0.00084	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:16	MFF
Diethyl Ether	ND	0.0084	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:16	MFF
Diisopropyl Ether (DIPE)	ND	0.00084	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:16	MFF
1,4-Dioxane	ND	0.084	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:16	MFF
Ethylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:16	MFF

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-C1 (5-10)

Sampled: 3/12/2019 12:15

Sample ID: 19C0480-19

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:16	MFF
2-Hexanone (MBK)	ND	0.017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:16	MFF
Isopropylbenzene (Cumene)	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:16	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:16	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0033	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:16	MFF
Methylene Chloride	ND	0.0084	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:16	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:16	MFF
Naphthalene	ND	0.0033	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:16	MFF
n-Propylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:16	MFF
Styrene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:16	MFF
1,1,1,2-Tetrachloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:16	MFF
1,1,2,2-Tetrachloroethane	ND	0.00084	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:16	MFF
Tetrachloroethylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:16	MFF
Tetrahydrofuran	ND	0.0084	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:16	MFF
Toluene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:16	MFF
1,2,3-Trichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:16	MFF
1,2,4-Trichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:16	MFF
1,1,1-Trichloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:16	MFF
1,1,2-Trichloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:16	MFF
Trichloroethylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:16	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0084	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:16	MFF
1,2,3-Trichloropropane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:16	MFF
1,2,4-Trimethylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:16	MFF
1,3,5-Trimethylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:16	MFF
Vinyl Chloride	ND	0.0084	mg/Kg dry	1	L-04	SW-846 8260C	3/13/19	3/14/19 15:16	MFF
m+p Xylene	ND	0.0033	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:16	MFF
o-Xylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:16	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	98.1	70-130	
Toluene-d8	92.9	70-130	
4-Bromofluorobenzene	95.3	70-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-C1 (5-10)

Sampled: 3/12/2019 12:15

Sample ID: 19C0480-19

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	0.54	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:40	IMR
Acenaphthylene	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:40	IMR
Acetophenone	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:40	IMR
Aniline	ND	0.78	mg/Kg dry	1	L-04, V-34	SW-846 8270D	3/15/19	3/19/19 18:40	IMR
Anthracene	1.4	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:40	IMR
Benzo(a)anthracene	2.3	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:40	IMR
Benzo(a)pyrene	2.2	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:40	IMR
Benzo(b)fluoranthene	2.5	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:40	IMR
Benzo(g,h,i)perylene	1.0	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:40	IMR
Benzo(k)fluoranthene	0.95	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:40	IMR
Bis(2-chloroethoxy)methane	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:40	IMR
Bis(2-chloroethyl)ether	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:40	IMR
Bis(2-chloroisopropyl)ether	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:40	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:40	IMR
4-Bromophenylphenylether	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:40	IMR
Butylbenzylphthalate	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:40	IMR
4-Chloroaniline	ND	1.5	mg/Kg dry	1	V-34	SW-846 8270D	3/15/19	3/19/19 18:40	IMR
2-Chloronaphthalene	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:40	IMR
2-Chlorophenol	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:40	IMR
Chrysene	2.2	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:40	IMR
Dibenz(a,h)anthracene	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:40	IMR
Dibenzofuran	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:40	IMR
Di-n-butylphthalate	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:40	IMR
1,2-Dichlorobenzene	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:40	IMR
1,3-Dichlorobenzene	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:40	IMR
1,4-Dichlorobenzene	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:40	IMR
3,3-Dichlorobenzidine	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:40	IMR
2,4-Dichlorophenol	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:40	IMR
Diethylphthalate	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:40	IMR
2,4-Dimethylphenol	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:40	IMR
Dimethylphthalate	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:40	IMR
2,4-Dinitrophenol	ND	1.5	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:40	IMR
2,4-Dinitrotoluene	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:40	IMR
2,6-Dinitrotoluene	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:40	IMR
Di-n-octylphthalate	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:40	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:40	IMR
Fluoranthene	5.1	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:40	IMR
Fluorene	0.70	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:40	IMR
Hexachlorobenzene	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:40	IMR
Hexachlorobutadiene	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:40	IMR
Hexachloroethane	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:40	IMR
Indeno(1,2,3-cd)pyrene	1.1	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:40	IMR
Isophorone	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:40	IMR
2-Methylnaphthalene	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:40	IMR

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-C1 (5-10)

Sampled: 3/12/2019 12:15

Sample ID: 19C0480-19

Sample Matrix: Soil

Sample Flags: RL-08

**Semivolatile Organic Compounds by GC/MS**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:40	IMR
3/4-Methylphenol	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:40	IMR
Naphthalene	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:40	IMR
Nitrobenzene	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:40	IMR
2-Nitrophenol	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:40	IMR
4-Nitrophenol	ND	1.5	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:40	IMR
Pentachlorophenol	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:40	IMR
Phenanthrene	4.6	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:40	IMR
Phenol	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:40	IMR
Pyrene	5.5	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:40	IMR
1,2,4-Trichlorobenzene	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:40	IMR
2,4,5-Trichlorophenol	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:40	IMR
2,4,6-Trichlorophenol	ND	0.78	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 18:40	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	82.3	30-130	
Phenol-d6	81.4	30-130	
Nitrobenzene-d5	81.5	30-130	
2-Fluorobiphenyl	88.1	30-130	
2,4,6-Tribromophenol	95.1	30-130	
p-Terphenyl-d14	103	30-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-C1 (5-10)

Sampled: 3/12/2019 12:15

Sample ID: 19C0480-19

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.091	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 20:02	JMB
Aroclor-1221 [1]	ND	0.091	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 20:02	JMB
Aroclor-1232 [1]	ND	0.091	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 20:02	JMB
Aroclor-1242 [1]	ND	0.091	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 20:02	JMB
Aroclor-1248 [1]	ND	0.091	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 20:02	JMB
Aroclor-1254 [1]	ND	0.091	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 20:02	JMB
Aroclor-1260 [1]	ND	0.091	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 20:02	JMB
Aroclor-1262 [1]	ND	0.091	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 20:02	JMB
Aroclor-1268 [1]	ND	0.091	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 20:02	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		81.3	30-150					3/18/19 20:02	
Decachlorobiphenyl [2]		90.6	30-150					3/18/19 20:02	
Tetrachloro-m-xylene [1]		108	30-150					3/18/19 20:02	
Tetrachloro-m-xylene [2]		106	30-150					3/18/19 20:02	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-C1 (5-10)

Sampled: 3/12/2019 12:15

Sample ID: 19C0480-19

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	1200	380	mg/Kg dry	20		SW-846 8100 Modified	3/15/19	3/19/19 12:00	RMW
<b>Surrogates</b>		<b>% Recovery</b>	<b>Recovery Limits</b>		<b>Flag/Qual</b>				
2-Fluorobiphenyl		*	40-140		S-01			3/19/19 12:00	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-C1 (5-10)

Sampled: 3/12/2019 12:15

Sample ID: 19C0480-19

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 16:08	QNW
Arsenic	5.2	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 16:08	QNW
Barium	32	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 16:08	QNW
Beryllium	0.36	0.19	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 16:08	QNW
Cadmium	0.39	0.19	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 16:08	QNW
Chromium	17	0.38	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 16:08	QNW
Lead	62	0.57	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 16:08	QNW
Mercury	0.028	0.027	mg/Kg dry	1		SW-846 7471B	3/13/19	3/15/19 13:17	TBC
Nickel	12	0.38	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 16:08	QNW
Selenium	ND	3.8	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 16:08	QNW
Silver	ND	0.38	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 16:08	QNW
Thallium	ND	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 16:08	QNW
Vanadium	22	0.76	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 16:08	QNW
Zinc	49	0.76	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 16:08	QNW



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-C1 (5-10)

Sampled: 3/12/2019 12:15

Sample ID: 19C0480-19

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	87.7		% Wt	1		SM 2540G	3/18/19	3/18/19 19:50	KMG
Ignitability	Absent		present/absent	1		SW-846 1030	3/17/19	3/17/19 12:20	KMV
pH @20.3°C	8.3		pH Units	1		SW-846 9045C	3/12/19	3/12/19 19:10	AIA
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	3/15/19	3/16/19 11:40	KMV
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	3/15/19	3/16/19 10:43	KMV
Specific conductance	16	2.0	µmhos/cm	1		SM21-22 2510B Modified	3/15/19	3/15/19 12:21	EC

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-B1 (0-5)

Sampled: 3/12/2019 12:40

Sample ID: 19C0480-20

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.092	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:41	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00092	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:41	MFF
Benzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:41	MFF
Bromobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:41	MFF
Bromochloromethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:41	MFF
Bromodichloromethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:41	MFF
Bromoform	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:41	MFF
Bromomethane	ND	0.0092	mg/Kg dry	1	V-34	SW-846 8260C	3/13/19	3/14/19 15:41	MFF
2-Butanone (MEK)	ND	0.037	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:41	MFF
n-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:41	MFF
sec-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:41	MFF
tert-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:41	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00092	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:41	MFF
Carbon Disulfide	ND	0.0055	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:41	MFF
Carbon Tetrachloride	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:41	MFF
Chlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:41	MFF
Chlorodibromomethane	ND	0.00092	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:41	MFF
Chloroethane	ND	0.0092	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:41	MFF
Chloroform	ND	0.0037	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:41	MFF
Chloromethane	ND	0.0092	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:41	MFF
2-Chlorotoluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:41	MFF
4-Chlorotoluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:41	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:41	MFF
1,2-Dibromoethane (EDB)	ND	0.00092	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:41	MFF
Dibromomethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:41	MFF
1,2-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:41	MFF
1,3-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:41	MFF
1,4-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:41	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0092	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:41	MFF
1,1-Dichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:41	MFF
1,2-Dichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:41	MFF
1,1-Dichloroethylene	ND	0.0037	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:41	MFF
cis-1,2-Dichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:41	MFF
trans-1,2-Dichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:41	MFF
1,2-Dichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:41	MFF
1,3-Dichloropropane	ND	0.00092	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:41	MFF
2,2-Dichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:41	MFF
1,1-Dichloropropene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:41	MFF
cis-1,3-Dichloropropene	ND	0.00092	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:41	MFF
trans-1,3-Dichloropropene	ND	0.00092	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:41	MFF
Diethyl Ether	ND	0.0092	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:41	MFF
Diisopropyl Ether (DIPE)	ND	0.00092	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:41	MFF
1,4-Dioxane	ND	0.092	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:41	MFF
Ethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:41	MFF

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-B1 (0-5)

Sampled: 3/12/2019 12:40

Sample ID: 19C0480-20

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:41	MFF
2-Hexanone (MBK)	ND	0.018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:41	MFF
Isopropylbenzene (Cumene)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:41	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:41	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0037	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:41	MFF
Methylene Chloride	ND	0.0092	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:41	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:41	MFF
Naphthalene	ND	0.0037	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:41	MFF
n-Propylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:41	MFF
Styrene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:41	MFF
1,1,1,2-Tetrachloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:41	MFF
1,1,2,2-Tetrachloroethane	ND	0.00092	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:41	MFF
Tetrachloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:41	MFF
Tetrahydrofuran	ND	0.0092	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:41	MFF
Toluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:41	MFF
1,2,3-Trichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:41	MFF
1,2,4-Trichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:41	MFF
1,1,1-Trichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:41	MFF
1,1,2-Trichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:41	MFF
Trichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:41	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0092	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:41	MFF
1,2,3-Trichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:41	MFF
1,2,4-Trimethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:41	MFF
1,3,5-Trimethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:41	MFF
Vinyl Chloride	ND	0.0092	mg/Kg dry	1	L-04	SW-846 8260C	3/13/19	3/14/19 15:41	MFF
m+p Xylene	ND	0.0037	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:41	MFF
o-Xylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/13/19	3/14/19 15:41	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	102	70-130	
Toluene-d8	92.5	70-130	
4-Bromofluorobenzene	95.1	70-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-B1 (0-5)

Sampled: 3/12/2019 12:40

Sample ID: 19C0480-20

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatle Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 19:10	IMR
Acenaphthylene	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 19:10	IMR
Acetophenone	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 19:10	IMR
Aniline	ND	0.76	mg/Kg dry	1	L-04, V-34	SW-846 8270D	3/15/19	3/19/19 19:10	IMR
Anthracene	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 19:10	IMR
Benzo(a)anthracene	0.72	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 19:10	IMR
Benzo(a)pyrene	0.82	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 19:10	IMR
Benzo(b)fluoranthene	1.0	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 19:10	IMR
Benzo(g,h,i)perylene	0.43	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 19:10	IMR
Benzo(k)fluoranthene	0.43	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 19:10	IMR
Bis(2-chloroethoxy)methane	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 19:10	IMR
Bis(2-chloroethyl)ether	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 19:10	IMR
Bis(2-chloroisopropyl)ether	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 19:10	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 19:10	IMR
4-Bromophenylphenylether	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 19:10	IMR
Butylbenzylphthalate	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 19:10	IMR
4-Chloroaniline	ND	1.5	mg/Kg dry	1	V-34	SW-846 8270D	3/15/19	3/19/19 19:10	IMR
2-Chloronaphthalene	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 19:10	IMR
2-Chlorophenol	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 19:10	IMR
Chrysene	0.80	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 19:10	IMR
Dibenz(a,h)anthracene	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 19:10	IMR
Dibenzofuran	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 19:10	IMR
Di-n-butylphthalate	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 19:10	IMR
1,2-Dichlorobenzene	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 19:10	IMR
1,3-Dichlorobenzene	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 19:10	IMR
1,4-Dichlorobenzene	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 19:10	IMR
3,3-Dichlorobenzidine	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 19:10	IMR
2,4-Dichlorophenol	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 19:10	IMR
Diethylphthalate	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 19:10	IMR
2,4-Dimethylphenol	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 19:10	IMR
Dimethylphthalate	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 19:10	IMR
2,4-Dinitrophenol	ND	1.5	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 19:10	IMR
2,4-Dinitrotoluene	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 19:10	IMR
2,6-Dinitrotoluene	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 19:10	IMR
Di-n-octylphthalate	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 19:10	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 19:10	IMR
Fluoranthene	1.1	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 19:10	IMR
Fluorene	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 19:10	IMR
Hexachlorobenzene	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 19:10	IMR
Hexachlorobutadiene	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 19:10	IMR
Hexachloroethane	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 19:10	IMR
Indeno(1,2,3-cd)pyrene	0.45	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 19:10	IMR
Isophorone	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 19:10	IMR
2-Methylnaphthalene	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 19:10	IMR

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-B1 (0-5)

Sampled: 3/12/2019 12:40

Sample ID: 19C0480-20

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 19:10	IMR
3/4-Methylphenol	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 19:10	IMR
Naphthalene	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 19:10	IMR
Nitrobenzene	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 19:10	IMR
2-Nitrophenol	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 19:10	IMR
4-Nitrophenol	ND	1.5	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 19:10	IMR
Pentachlorophenol	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 19:10	IMR
Phenanthrene	0.49	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 19:10	IMR
Phenol	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 19:10	IMR
Pyrene	1.3	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 19:10	IMR
1,2,4-Trichlorobenzene	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 19:10	IMR
2,4,5-Trichlorophenol	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 19:10	IMR
2,4,6-Trichlorophenol	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/19/19 19:10	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	87.0	30-130	
Phenol-d6	87.4	30-130	
Nitrobenzene-d5	85.8	30-130	
2-Fluorobiphenyl	92.7	30-130	
2,4,6-Tribromophenol	97.4	30-130	
p-Terphenyl-d14	106	30-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-B1 (0-5)

Sampled: 3/12/2019 12:40

Sample ID: 19C0480-20

Sample Matrix: Soil

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 20:20	JMB
Aroclor-1221 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 20:20	JMB
Aroclor-1232 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 20:20	JMB
Aroclor-1242 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 20:20	JMB
Aroclor-1248 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 20:20	JMB
Aroclor-1254 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 20:20	JMB
Aroclor-1260 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 20:20	JMB
Aroclor-1262 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 20:20	JMB
Aroclor-1268 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 20:20	JMB
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		78.6	30-150					3/18/19 20:20	
Decachlorobiphenyl [2]		86.4	30-150					3/18/19 20:20	
Tetrachloro-m-xylene [1]		108	30-150					3/18/19 20:20	
Tetrachloro-m-xylene [2]		105	30-150					3/18/19 20:20	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-B1 (0-5)

Sampled: 3/12/2019 12:40

Sample ID: 19C0480-20

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	760	190	mg/Kg dry	10		SW-846 8100 Modified	3/15/19	3/19/19 13:50	RMW
<b>Surrogates</b>		<b>% Recovery</b>	<b>Recovery Limits</b>		<b>Flag/Qual</b>				
2-Fluorobiphenyl		75.3	40-140					3/19/19 13:50	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-B1 (0-5)

Sampled: 3/12/2019 12:40

Sample ID: 19C0480-20

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.8	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 16:13	QNW
Arsenic	9.6	1.8	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 16:13	QNW
Barium	34	1.8	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 16:13	QNW
Beryllium	0.36	0.18	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 16:13	QNW
Cadmium	0.50	0.18	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 16:13	QNW
Chromium	17	0.36	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 16:13	QNW
Lead	34	0.54	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 16:13	QNW
Mercury	0.034	0.027	mg/Kg dry	1		SW-846 7471B	3/13/19	3/15/19 13:23	TBC
Nickel	13	0.36	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 16:13	QNW
Selenium	ND	3.6	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 16:13	QNW
Silver	ND	0.36	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 16:13	QNW
Thallium	ND	1.8	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 16:13	QNW
Vanadium	23	0.72	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 16:13	QNW
Zinc	46	0.72	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 16:13	QNW



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-B1 (0-5)

Sampled: 3/12/2019 12:40

Sample ID: 19C0480-20

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	90.0		% Wt	1		SM 2540G	3/18/19	3/18/19 19:50	KMG
Ignitability	Absent		present/absent	1		SW-846 1030	3/17/19	3/17/19 12:20	KMV
pH @20.6°C	7.9		pH Units	1		SW-846 9045C	3/12/19	3/12/19 19:57	AIA
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	3/15/19	3/16/19 11:40	KMV
Reactive Sulfide	ND	19	mg/Kg	1		SW-846 9030A	3/15/19	3/16/19 10:43	KMV
Specific conductance	16	2.0	µmhos/cm	1		SM21-22 2510B Modified	3/15/19	3/15/19 12:21	EC

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-B1 (5-10)

Sampled: 3/12/2019 12:45

Sample ID: 19C0480-21

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.085	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 15:49	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00085	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 15:49	MFF
Benzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 15:49	MFF
Bromobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 15:49	MFF
Bromochloromethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 15:49	MFF
Bromodichloromethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 15:49	MFF
Bromoform	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 15:49	MFF
Bromomethane	ND	0.0085	mg/Kg dry	1	V-34	SW-846 8260C	3/14/19	3/14/19 15:49	MFF
2-Butanone (MEK)	ND	0.034	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 15:49	MFF
n-Butylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 15:49	MFF
sec-Butylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 15:49	MFF
tert-Butylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 15:49	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00085	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 15:49	MFF
Carbon Disulfide	ND	0.0051	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 15:49	MFF
Carbon Tetrachloride	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 15:49	MFF
Chlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 15:49	MFF
Chlorodibromomethane	ND	0.00085	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 15:49	MFF
Chloroethane	ND	0.0085	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 15:49	MFF
Chloroform	ND	0.0034	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 15:49	MFF
Chloromethane	ND	0.0085	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 15:49	MFF
2-Chlorotoluene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 15:49	MFF
4-Chlorotoluene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 15:49	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0034	mg/Kg dry	1	V-05	SW-846 8260C	3/14/19	3/14/19 15:49	MFF
1,2-Dibromoethane (EDB)	ND	0.00085	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 15:49	MFF
Dibromomethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 15:49	MFF
1,2-Dichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 15:49	MFF
1,3-Dichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 15:49	MFF
1,4-Dichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 15:49	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0085	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 15:49	MFF
1,1-Dichloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 15:49	MFF
1,2-Dichloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 15:49	MFF
1,1-Dichloroethylene	ND	0.0034	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 15:49	MFF
cis-1,2-Dichloroethylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 15:49	MFF
trans-1,2-Dichloroethylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 15:49	MFF
1,2-Dichloropropane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 15:49	MFF
1,3-Dichloropropane	ND	0.00085	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 15:49	MFF
2,2-Dichloropropane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 15:49	MFF
1,1-Dichloropropene	ND	0.0034	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 15:49	MFF
cis-1,3-Dichloropropene	ND	0.00085	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 15:49	MFF
trans-1,3-Dichloropropene	ND	0.00085	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 15:49	MFF
Diethyl Ether	ND	0.0085	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 15:49	MFF
Diisopropyl Ether (DIPE)	ND	0.00085	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 15:49	MFF
1,4-Dioxane	ND	0.17	mg/Kg dry	1	V-16	SW-846 8260C	3/14/19	3/14/19 15:49	MFF
Ethylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 15:49	MFF

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-B1 (5-10)

Sampled: 3/12/2019 12:45

Sample ID: 19C0480-21

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 15:49	MFF
2-Hexanone (MBK)	ND	0.017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 15:49	MFF
Isopropylbenzene (Cumene)	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 15:49	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 15:49	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0034	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 15:49	MFF
Methylene Chloride	ND	0.0085	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 15:49	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 15:49	MFF
Naphthalene	0.0045	0.0034	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 15:49	MFF
n-Propylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 15:49	MFF
Styrene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 15:49	MFF
1,1,1,2-Tetrachloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 15:49	MFF
1,1,2,2-Tetrachloroethane	ND	0.00085	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 15:49	MFF
Tetrachloroethylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 15:49	MFF
Tetrahydrofuran	ND	0.0085	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 15:49	MFF
Toluene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 15:49	MFF
1,2,3-Trichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 15:49	MFF
1,2,4-Trichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 15:49	MFF
1,1,1-Trichloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 15:49	MFF
1,1,2-Trichloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 15:49	MFF
Trichloroethylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 15:49	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0085	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 15:49	MFF
1,2,3-Trichloropropane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 15:49	MFF
1,2,4-Trimethylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 15:49	MFF
1,3,5-Trimethylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 15:49	MFF
Vinyl Chloride	ND	0.0085	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 15:49	MFF
m+p Xylene	ND	0.0034	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 15:49	MFF
o-Xylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 15:49	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	91.8	70-130	3/14/19 15:49
Toluene-d8	98.4	70-130	3/14/19 15:49
4-Bromofluorobenzene	95.0	70-130	3/14/19 15:49

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-B1 (5-10)

Sampled: 3/12/2019 12:45

Sample ID: 19C0480-21

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatiles Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.92	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 17:28	IMR
Acenaphthylene	ND	0.92	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 17:28	IMR
Acetophenone	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 17:28	IMR
Aniline	ND	1.8	mg/Kg dry	5	MS-09, V-34	SW-846 8270D	3/15/19	3/18/19 17:28	IMR
Anthracene	ND	0.92	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 17:28	IMR
Benzo(a)anthracene	1.3	0.92	mg/Kg dry	5	MS-09	SW-846 8270D	3/15/19	3/18/19 17:28	IMR
Benzo(a)pyrene	1.4	0.92	mg/Kg dry	5	MS-09	SW-846 8270D	3/15/19	3/18/19 17:28	IMR
Benzo(b)fluoranthene	1.6	0.92	mg/Kg dry	5	MS-09	SW-846 8270D	3/15/19	3/18/19 17:28	IMR
Benzo(g,h,i)perylene	0.98	0.92	mg/Kg dry	5	MS-09	SW-846 8270D	3/15/19	3/18/19 17:28	IMR
Benzo(k)fluoranthene	ND	0.92	mg/Kg dry	5	MS-09	SW-846 8270D	3/15/19	3/18/19 17:28	IMR
Bis(2-chloroethoxy)methane	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 17:28	IMR
Bis(2-chloroethyl)ether	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 17:28	IMR
Bis(2-chloroisopropyl)ether	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 17:28	IMR
Bis(2-Ethylhexyl)phthalate	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 17:28	IMR
4-Bromophenylphenylether	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 17:28	IMR
Butylbenzylphthalate	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 17:28	IMR
4-Chloroaniline	ND	3.6	mg/Kg dry	5	MS-09, V-34	SW-846 8270D	3/15/19	3/18/19 17:28	IMR
2-Chloronaphthalene	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 17:28	IMR
2-Chlorophenol	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 17:28	IMR
Chrysene	1.4	0.92	mg/Kg dry	5	MS-09	SW-846 8270D	3/15/19	3/18/19 17:28	IMR
Dibenz(a,h)anthracene	ND	0.92	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 17:28	IMR
Dibenzofuran	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 17:28	IMR
Di-n-butylphthalate	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 17:28	IMR
1,2-Dichlorobenzene	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 17:28	IMR
1,3-Dichlorobenzene	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 17:28	IMR
1,4-Dichlorobenzene	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 17:28	IMR
3,3-Dichlorobenzidine	ND	0.92	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 17:28	IMR
2,4-Dichlorophenol	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 17:28	IMR
Diethylphthalate	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 17:28	IMR
2,4-Dimethylphenol	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 17:28	IMR
Dimethylphthalate	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 17:28	IMR
2,4-Dinitrophenol	ND	3.6	mg/Kg dry	5	MS-09	SW-846 8270D	3/15/19	3/18/19 17:28	IMR
2,4-Dinitrotoluene	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 17:28	IMR
2,6-Dinitrotoluene	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 17:28	IMR
Di-n-octylphthalate	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 17:28	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 17:28	IMR
Fluoranthene	2.4	0.92	mg/Kg dry	5	MS-09	SW-846 8270D	3/15/19	3/18/19 17:28	IMR
Fluorene	ND	0.92	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 17:28	IMR
Hexachlorobenzene	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 17:28	IMR
Hexachlorobutadiene	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 17:28	IMR
Hexachloroethane	ND	1.8	mg/Kg dry	5	MS-09	SW-846 8270D	3/15/19	3/18/19 17:28	IMR
Indeno(1,2,3-cd)pyrene	ND	0.92	mg/Kg dry	5	MS-09	SW-846 8270D	3/15/19	3/18/19 17:28	IMR
Isophorone	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 17:28	IMR
2-Methylnaphthalene	ND	0.92	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 17:28	IMR

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-B1 (5-10)

Sampled: 3/12/2019 12:45

Sample ID: 19C0480-21

Sample Matrix: Soil

Sample Flags: RL-08

**Semivolatile Organic Compounds by GC/MS**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 17:28	IMR
3/4-Methylphenol	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 17:28	IMR
Naphthalene	ND	0.92	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 17:28	IMR
Nitrobenzene	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 17:28	IMR
2-Nitrophenol	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 17:28	IMR
4-Nitrophenol	ND	3.6	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 17:28	IMR
Pentachlorophenol	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 17:28	IMR
Phenanthrene	1.7	0.92	mg/Kg dry	5	MS-09	SW-846 8270D	3/15/19	3/18/19 17:28	IMR
Phenol	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 17:28	IMR
Pyrene	3.1	0.92	mg/Kg dry	5	MS-09	SW-846 8270D	3/15/19	3/18/19 17:28	IMR
1,2,4-Trichlorobenzene	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 17:28	IMR
2,4,5-Trichlorophenol	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 17:28	IMR
2,4,6-Trichlorophenol	ND	1.8	mg/Kg dry	5		SW-846 8270D	3/15/19	3/18/19 17:28	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	73.2	30-130	
Phenol-d6	74.8	30-130	
Nitrobenzene-d5	70.8	30-130	
2-Fluorobiphenyl	78.7	30-130	
2,4,6-Tribromophenol	67.4	30-130	
p-Terphenyl-d14	95.5	30-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-B1 (5-10)

Sampled: 3/12/2019 12:45

Sample ID: 19C0480-21

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.087	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 19:41	TG
Aroclor-1221 [1]	ND	0.087	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 19:41	TG
Aroclor-1232 [1]	ND	0.087	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 19:41	TG
Aroclor-1242 [1]	ND	0.087	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 19:41	TG
Aroclor-1248 [1]	ND	0.087	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 19:41	TG
Aroclor-1254 [1]	ND	0.087	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 19:41	TG
Aroclor-1260 [1]	ND	0.087	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 19:41	TG
Aroclor-1262 [1]	ND	0.087	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 19:41	TG
Aroclor-1268 [1]	ND	0.087	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 19:41	TG
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		95.8	30-150					3/18/19 19:41	
Decachlorobiphenyl [2]		94.0	30-150					3/18/19 19:41	
Tetrachloro-m-xylene [1]		104	30-150					3/18/19 19:41	
Tetrachloro-m-xylene [2]		101	30-150					3/18/19 19:41	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-B1 (5-10)

Sampled: 3/12/2019 12:45

Sample ID: 19C0480-21

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	480	91	mg/Kg dry	10		SW-846 8100 Modified	3/15/19	3/18/19 0:00	RMW
<b>Surrogates</b>		<b>% Recovery</b>	<b>Recovery Limits</b>		<b>Flag/Qual</b>				
2-Fluorobiphenyl		50.0	40-140					3/18/19 0:00	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-B1 (5-10)

Sampled: 3/12/2019 12:45

Sample ID: 19C0480-21

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.8	mg/Kg dry	1	MS-07	SW-846 6010D	3/15/19	3/18/19 10:31	EJB
Arsenic	5.4	1.8	mg/Kg dry	1		SW-846 6010D	3/15/19	3/18/19 10:31	EJB
Barium	31	1.8	mg/Kg dry	1		SW-846 6010D	3/15/19	3/18/19 10:31	EJB
Beryllium	0.35	0.18	mg/Kg dry	1		SW-846 6010D	3/15/19	3/18/19 10:31	EJB
Cadmium	0.33	0.18	mg/Kg dry	1		SW-846 6010D	3/15/19	3/18/19 10:31	EJB
Chromium	14	0.36	mg/Kg dry	1		SW-846 6010D	3/15/19	3/18/19 10:31	EJB
Lead	23	0.53	mg/Kg dry	1		SW-846 6010D	3/15/19	3/18/19 10:31	EJB
Mercury	ND	0.026	mg/Kg dry	1		SW-846 7471B	3/13/19	3/15/19 13:24	TBC
Nickel	12	0.36	mg/Kg dry	1		SW-846 6010D	3/15/19	3/18/19 10:31	EJB
Selenium	ND	3.6	mg/Kg dry	1		SW-846 6010D	3/15/19	3/18/19 10:31	EJB
Silver	ND	0.36	mg/Kg dry	1		SW-846 6010D	3/15/19	3/18/19 10:31	EJB
Thallium	ND	1.8	mg/Kg dry	1		SW-846 6010D	3/15/19	3/18/19 10:31	EJB
Vanadium	22	0.71	mg/Kg dry	1		SW-846 6010D	3/15/19	3/18/19 10:31	EJB
Zinc	34	0.71	mg/Kg dry	1		SW-846 6010D	3/15/19	3/18/19 10:31	EJB



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-B1 (5-10)

Sampled: 3/12/2019 12:45

Sample ID: 19C0480-21

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	91.9		% Wt	1		SM 2540G	3/18/19	3/18/19 19:51	KMG
Ignitability	Absent		present/absent	1		SW-846 1030	3/17/19	3/17/19 12:20	KMV
pH @21.8°C	7.2		pH Units	1		SW-846 9045C	3/12/19	3/12/19 19:10	AIA
Reactive Cyanide	ND	4.0	mg/Kg	1		SW-846 9014	3/15/19	3/16/19 11:40	KMV
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	3/15/19	3/16/19 10:43	KMV
Specific conductance	9.0	2.0	µmhos/cm	1		SM21-22 2510B Modified	3/15/19	3/15/19 12:21	EC

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-B2 (0-5)

Sampled: 3/12/2019 13:00

Sample ID: 19C0480-22

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.085	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:16	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00085	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:16	MFF
Benzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:16	MFF
Bromobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:16	MFF
Bromochloromethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:16	MFF
Bromodichloromethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:16	MFF
Bromoform	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:16	MFF
Bromomethane	ND	0.0085	mg/Kg dry	1	V-34	SW-846 8260C	3/14/19	3/14/19 16:16	MFF
2-Butanone (MEK)	ND	0.034	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:16	MFF
n-Butylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:16	MFF
sec-Butylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:16	MFF
tert-Butylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:16	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00085	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:16	MFF
Carbon Disulfide	ND	0.0051	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:16	MFF
Carbon Tetrachloride	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:16	MFF
Chlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:16	MFF
Chlorodibromomethane	ND	0.00085	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:16	MFF
Chloroethane	ND	0.0085	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:16	MFF
Chloroform	ND	0.0034	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:16	MFF
Chloromethane	ND	0.0085	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:16	MFF
2-Chlorotoluene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:16	MFF
4-Chlorotoluene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:16	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0034	mg/Kg dry	1	V-05	SW-846 8260C	3/14/19	3/14/19 16:16	MFF
1,2-Dibromoethane (EDB)	ND	0.00085	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:16	MFF
Dibromomethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:16	MFF
1,2-Dichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:16	MFF
1,3-Dichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:16	MFF
1,4-Dichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:16	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0085	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:16	MFF
1,1-Dichloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:16	MFF
1,2-Dichloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:16	MFF
1,1-Dichloroethylene	ND	0.0034	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:16	MFF
cis-1,2-Dichloroethylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:16	MFF
trans-1,2-Dichloroethylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:16	MFF
1,2-Dichloropropane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:16	MFF
1,3-Dichloropropane	ND	0.00085	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:16	MFF
2,2-Dichloropropane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:16	MFF
1,1-Dichloropropene	ND	0.0034	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:16	MFF
cis-1,3-Dichloropropene	ND	0.00085	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:16	MFF
trans-1,3-Dichloropropene	ND	0.00085	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:16	MFF
Diethyl Ether	ND	0.0085	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:16	MFF
Diisopropyl Ether (DIPE)	ND	0.00085	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:16	MFF
1,4-Dioxane	ND	0.17	mg/Kg dry	1	V-16	SW-846 8260C	3/14/19	3/14/19 16:16	MFF
Ethylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:16	MFF

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-B2 (0-5)

Sampled: 3/12/2019 13:00

Sample ID: 19C0480-22

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:16	MFF
2-Hexanone (MBK)	ND	0.017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:16	MFF
Isopropylbenzene (Cumene)	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:16	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:16	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0034	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:16	MFF
Methylene Chloride	ND	0.0085	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:16	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:16	MFF
Naphthalene	ND	0.0034	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:16	MFF
n-Propylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:16	MFF
Styrene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:16	MFF
1,1,1,2-Tetrachloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:16	MFF
1,1,2,2-Tetrachloroethane	ND	0.00085	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:16	MFF
Tetrachloroethylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:16	MFF
Tetrahydrofuran	ND	0.0085	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:16	MFF
Toluene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:16	MFF
1,2,3-Trichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:16	MFF
1,2,4-Trichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:16	MFF
1,1,1-Trichloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:16	MFF
1,1,2-Trichloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:16	MFF
Trichloroethylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:16	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0085	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:16	MFF
1,2,3-Trichloropropane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:16	MFF
1,2,4-Trimethylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:16	MFF
1,3,5-Trimethylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:16	MFF
Vinyl Chloride	ND	0.0085	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:16	MFF
m+p Xylene	ND	0.0034	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:16	MFF
o-Xylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:16	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	91.1	70-130	3/14/19 16:16
Toluene-d8	99.8	70-130	3/14/19 16:16
4-Bromofluorobenzene	97.2	70-130	3/14/19 16:16

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-B2 (0-5)

Sampled: 3/12/2019 13:00

Sample ID: 19C0480-22

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.19	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:12	BGL
Acenaphthylene	ND	0.19	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:12	BGL
Acetophenone	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:12	BGL
Aniline	ND	0.38	mg/Kg dry	1	V-34	SW-846 8270D	3/15/19	3/20/19 8:12	BGL
Anthracene	ND	0.19	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:12	BGL
Benzo(a)anthracene	0.68	0.19	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:12	BGL
Benzo(a)pyrene	0.72	0.19	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:12	BGL
Benzo(b)fluoranthene	0.86	0.19	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:12	BGL
Benzo(g,h,i)perylene	0.57	0.19	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:12	BGL
Benzo(k)fluoranthene	0.34	0.19	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:12	BGL
Bis(2-chloroethoxy)methane	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:12	BGL
Bis(2-chloroethyl)ether	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:12	BGL
Bis(2-chloroisopropyl)ether	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:12	BGL
Bis(2-Ethylhexyl)phthalate	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:12	BGL
4-Bromophenylphenylether	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:12	BGL
Butylbenzylphthalate	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:12	BGL
4-Chloroaniline	ND	0.74	mg/Kg dry	1	V-34	SW-846 8270D	3/15/19	3/20/19 8:12	BGL
2-Chloronaphthalene	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:12	BGL
2-Chlorophenol	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:12	BGL
Chrysene	0.74	0.19	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:12	BGL
Dibenz(a,h)anthracene	ND	0.19	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:12	BGL
Dibenzofuran	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:12	BGL
Di-n-butylphthalate	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:12	BGL
1,2-Dichlorobenzene	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:12	BGL
1,3-Dichlorobenzene	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:12	BGL
1,4-Dichlorobenzene	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:12	BGL
3,3-Dichlorobenzidine	ND	0.19	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:12	BGL
2,4-Dichlorophenol	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:12	BGL
Diethylphthalate	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:12	BGL
2,4-Dimethylphenol	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:12	BGL
Dimethylphthalate	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:12	BGL
2,4-Dinitrophenol	ND	0.74	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:12	BGL
2,4-Dinitrotoluene	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:12	BGL
2,6-Dinitrotoluene	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:12	BGL
Di-n-octylphthalate	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:12	BGL
1,2-Diphenylhydrazine/Azobenzene	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:12	BGL
Fluoranthene	1.3	0.19	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:12	BGL
Fluorene	ND	0.19	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:12	BGL
Hexachlorobenzene	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:12	BGL
Hexachlorobutadiene	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:12	BGL
Hexachloroethane	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:12	BGL
Indeno(1,2,3-cd)pyrene	0.55	0.19	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:12	BGL
Isophorone	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:12	BGL
2-Methylnaphthalene	ND	0.19	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:12	BGL

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-B2 (0-5)

Sampled: 3/12/2019 13:00

Sample ID: 19C0480-22

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:12	BGL
3/4-Methylphenol	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:12	BGL
Naphthalene	ND	0.19	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:12	BGL
Nitrobenzene	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:12	BGL
2-Nitrophenol	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:12	BGL
4-Nitrophenol	ND	0.74	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:12	BGL
Pentachlorophenol	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:12	BGL
Phenanthrene	0.80	0.19	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:12	BGL
Phenol	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:12	BGL
Pyrene	1.4	0.19	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:12	BGL
1,2,4-Trichlorobenzene	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:12	BGL
2,4,5-Trichlorophenol	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:12	BGL
2,4,6-Trichlorophenol	ND	0.38	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:12	BGL
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2-Fluorophenol		47.6	30-130					3/20/19 8:12	
Phenol-d6		48.2	30-130					3/20/19 8:12	
Nitrobenzene-d5		46.1	30-130					3/20/19 8:12	
2-Fluorobiphenyl		50.9	30-130					3/20/19 8:12	
2,4,6-Tribromophenol		46.7	30-130					3/20/19 8:12	
p-Terphenyl-d14		52.6	30-130					3/20/19 8:12	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-B2 (0-5)

Sampled: 3/12/2019 13:00

Sample ID: 19C0480-22

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 19:54	TG
Aroclor-1221 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 19:54	TG
Aroclor-1232 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 19:54	TG
Aroclor-1242 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 19:54	TG
Aroclor-1248 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 19:54	TG
Aroclor-1254 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 19:54	TG
Aroclor-1260 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 19:54	TG
Aroclor-1262 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 19:54	TG
Aroclor-1268 [1]	ND	0.090	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 19:54	TG
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		92.3	30-150					3/18/19 19:54	
Decachlorobiphenyl [2]		98.9	30-150					3/18/19 19:54	
Tetrachloro-m-xylene [1]		103	30-150					3/18/19 19:54	
Tetrachloro-m-xylene [2]		96.3	30-150					3/18/19 19:54	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-B2 (0-5)

Sampled: 3/12/2019 13:00

Sample ID: 19C0480-22

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	300	93	mg/Kg dry	10		SW-846 8100 Modified	3/15/19	3/17/19 17:20	RMW
<b>Surrogates</b>		<b>% Recovery</b>	<b>Recovery Limits</b>		<b>Flag/Qual</b>				
2-Fluorobiphenyl		42.9	40-140					3/17/19 17:20	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-B2 (0-5)

Sampled: 3/12/2019 13:00

Sample ID: 19C0480-22

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.8	mg/Kg dry	1		SW-846 6010D	3/15/19	3/18/19 10:36	EJB
Arsenic	5.6	1.8	mg/Kg dry	1		SW-846 6010D	3/15/19	3/18/19 10:36	EJB
Barium	32	1.8	mg/Kg dry	1		SW-846 6010D	3/15/19	3/18/19 10:36	EJB
Beryllium	0.32	0.18	mg/Kg dry	1		SW-846 6010D	3/15/19	3/18/19 10:36	EJB
Cadmium	0.41	0.18	mg/Kg dry	1		SW-846 6010D	3/15/19	3/18/19 10:36	EJB
Chromium	13	0.37	mg/Kg dry	1		SW-846 6010D	3/15/19	3/18/19 10:36	EJB
Lead	62	0.55	mg/Kg dry	1		SW-846 6010D	3/15/19	3/18/19 10:36	EJB
Mercury	0.054	0.028	mg/Kg dry	1		SW-846 7471B	3/13/19	3/15/19 13:26	TBC
Nickel	9.4	0.37	mg/Kg dry	1		SW-846 6010D	3/15/19	3/18/19 10:36	EJB
Selenium	ND	3.7	mg/Kg dry	1		SW-846 6010D	3/15/19	3/18/19 10:36	EJB
Silver	ND	0.37	mg/Kg dry	1		SW-846 6010D	3/15/19	3/18/19 10:36	EJB
Thallium	ND	1.8	mg/Kg dry	1		SW-846 6010D	3/15/19	3/18/19 10:36	EJB
Vanadium	19	0.74	mg/Kg dry	1		SW-846 6010D	3/15/19	3/18/19 10:36	EJB
Zinc	48	0.74	mg/Kg dry	1		SW-846 6010D	3/15/19	3/18/19 10:36	EJB



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-B2 (0-5)

Sampled: 3/12/2019 13:00

Sample ID: 19C0480-22

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	88.6		% Wt	1		SM 2540G	3/18/19	3/18/19 19:51	KMG
Ignitability	Absent		present/absent	1		SW-846 1030	3/17/19	3/17/19 12:20	KMV
pH @20.3°C	7.4		pH Units	1		SW-846 9045C	3/12/19	3/12/19 19:57	AIA
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	3/15/19	3/16/19 11:40	KMV
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	3/15/19	3/16/19 10:43	KMV
Specific conductance	11	2.0	µmhos/cm	1		SM21-22 2510B Modified	3/15/19	3/15/19 12:21	EC

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-B2 (5-10)

Sampled: 3/12/2019 13:05

Sample ID: 19C0480-23

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.092	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:44	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00092	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:44	MFF
Benzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:44	MFF
Bromobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:44	MFF
Bromochloromethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:44	MFF
Bromodichloromethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:44	MFF
Bromoform	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:44	MFF
Bromomethane	ND	0.0092	mg/Kg dry	1	V-34	SW-846 8260C	3/14/19	3/14/19 16:44	MFF
2-Butanone (MEK)	ND	0.037	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:44	MFF
n-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:44	MFF
sec-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:44	MFF
tert-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:44	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00092	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:44	MFF
Carbon Disulfide	ND	0.0055	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:44	MFF
Carbon Tetrachloride	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:44	MFF
Chlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:44	MFF
Chlorodibromomethane	ND	0.00092	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:44	MFF
Chloroethane	ND	0.0092	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:44	MFF
Chloroform	ND	0.0037	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:44	MFF
Chloromethane	ND	0.0092	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:44	MFF
2-Chlorotoluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:44	MFF
4-Chlorotoluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:44	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0037	mg/Kg dry	1	V-05	SW-846 8260C	3/14/19	3/14/19 16:44	MFF
1,2-Dibromoethane (EDB)	ND	0.00092	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:44	MFF
Dibromomethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:44	MFF
1,2-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:44	MFF
1,3-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:44	MFF
1,4-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:44	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0092	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:44	MFF
1,1-Dichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:44	MFF
1,2-Dichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:44	MFF
1,1-Dichloroethylene	ND	0.0037	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:44	MFF
cis-1,2-Dichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:44	MFF
trans-1,2-Dichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:44	MFF
1,2-Dichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:44	MFF
1,3-Dichloropropane	ND	0.00092	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:44	MFF
2,2-Dichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:44	MFF
1,1-Dichloropropene	ND	0.0037	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:44	MFF
cis-1,3-Dichloropropene	ND	0.00092	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:44	MFF
trans-1,3-Dichloropropene	ND	0.00092	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:44	MFF
Diethyl Ether	ND	0.0092	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:44	MFF
Diisopropyl Ether (DIPE)	ND	0.00092	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:44	MFF
1,4-Dioxane	ND	0.18	mg/Kg dry	1	V-16	SW-846 8260C	3/14/19	3/14/19 16:44	MFF
Ethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:44	MFF

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-B2 (5-10)

Sampled: 3/12/2019 13:05

Sample ID: 19C0480-23

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:44	MFF
2-Hexanone (MBK)	ND	0.018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:44	MFF
Isopropylbenzene (Cumene)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:44	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:44	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0037	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:44	MFF
Methylene Chloride	ND	0.0092	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:44	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:44	MFF
Naphthalene	ND	0.0037	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:44	MFF
n-Propylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:44	MFF
Styrene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:44	MFF
1,1,1,2-Tetrachloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:44	MFF
1,1,2,2-Tetrachloroethane	ND	0.00092	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:44	MFF
Tetrachloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:44	MFF
Tetrahydrofuran	ND	0.0092	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:44	MFF
Toluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:44	MFF
1,2,3-Trichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:44	MFF
1,2,4-Trichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:44	MFF
1,1,1-Trichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:44	MFF
1,1,2-Trichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:44	MFF
Trichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:44	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0092	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:44	MFF
1,2,3-Trichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:44	MFF
1,2,4-Trimethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:44	MFF
1,3,5-Trimethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:44	MFF
Vinyl Chloride	ND	0.0092	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:44	MFF
m+p Xylene	ND	0.0037	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:44	MFF
o-Xylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 16:44	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	91.5	70-130	
Toluene-d8	99.0	70-130	
4-Bromofluorobenzene	98.5	70-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-B2 (5-10)

Sampled: 3/12/2019 13:05

Sample ID: 19C0480-23

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatle Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.37	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:27	IMR
Acenaphthylene	ND	0.37	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:27	IMR
Acetophenone	ND	0.74	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:27	IMR
Aniline	ND	0.74	mg/Kg dry	2	V-34	SW-846 8270D	3/15/19	3/18/19 18:27	IMR
Anthracene	ND	0.37	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:27	IMR
Benzo(a)anthracene	0.84	0.37	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:27	IMR
Benzo(a)pyrene	0.92	0.37	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:27	IMR
Benzo(b)fluoranthene	1.1	0.37	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:27	IMR
Benzo(g,h,i)perylene	0.70	0.37	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:27	IMR
Benzo(k)fluoranthene	0.40	0.37	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:27	IMR
Bis(2-chloroethoxy)methane	ND	0.74	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:27	IMR
Bis(2-chloroethyl)ether	ND	0.74	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:27	IMR
Bis(2-chloroisopropyl)ether	ND	0.74	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:27	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.74	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:27	IMR
4-Bromophenylphenylether	ND	0.74	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:27	IMR
Butylbenzylphthalate	ND	0.74	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:27	IMR
4-Chloroaniline	ND	1.4	mg/Kg dry	2	V-34	SW-846 8270D	3/15/19	3/18/19 18:27	IMR
2-Chloronaphthalene	ND	0.74	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:27	IMR
2-Chlorophenol	ND	0.74	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:27	IMR
Chrysene	0.88	0.37	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:27	IMR
Dibenz(a,h)anthracene	ND	0.37	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:27	IMR
Dibenzofuran	ND	0.74	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:27	IMR
Di-n-butylphthalate	ND	0.74	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:27	IMR
1,2-Dichlorobenzene	ND	0.74	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:27	IMR
1,3-Dichlorobenzene	ND	0.74	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:27	IMR
1,4-Dichlorobenzene	ND	0.74	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:27	IMR
3,3-Dichlorobenzidine	ND	0.37	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:27	IMR
2,4-Dichlorophenol	ND	0.74	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:27	IMR
Diethylphthalate	ND	0.74	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:27	IMR
2,4-Dimethylphenol	ND	0.74	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:27	IMR
Dimethylphthalate	ND	0.74	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:27	IMR
2,4-Dinitrophenol	ND	1.4	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:27	IMR
2,4-Dinitrotoluene	ND	0.74	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:27	IMR
2,6-Dinitrotoluene	ND	0.74	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:27	IMR
Di-n-octylphthalate	ND	0.74	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:27	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.74	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:27	IMR
Fluoranthene	1.6	0.37	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:27	IMR
Fluorene	ND	0.37	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:27	IMR
Hexachlorobenzene	ND	0.74	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:27	IMR
Hexachlorobutadiene	ND	0.74	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:27	IMR
Hexachloroethane	ND	0.74	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:27	IMR
Indeno(1,2,3-cd)pyrene	0.67	0.37	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:27	IMR
Isophorone	ND	0.74	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:27	IMR
2-Methylnaphthalene	ND	0.37	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:27	IMR

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-B2 (5-10)

Sampled: 3/12/2019 13:05

Sample ID: 19C0480-23

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	0.74	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:27	IMR
3/4-Methylphenol	ND	0.74	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:27	IMR
Naphthalene	ND	0.37	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:27	IMR
Nitrobenzene	ND	0.74	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:27	IMR
2-Nitrophenol	ND	0.74	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:27	IMR
4-Nitrophenol	ND	1.4	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:27	IMR
Pentachlorophenol	ND	0.74	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:27	IMR
Phenanthrene	0.79	0.37	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:27	IMR
Phenol	ND	0.74	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:27	IMR
Pyrene	1.7	0.37	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:27	IMR
1,2,4-Trichlorobenzene	ND	0.74	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:27	IMR
2,4,5-Trichlorophenol	ND	0.74	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:27	IMR
2,4,6-Trichlorophenol	ND	0.74	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:27	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	55.6	30-130	
Phenol-d6	54.0	30-130	
Nitrobenzene-d5	52.5	30-130	
2-Fluorobiphenyl	55.2	30-130	
2,4,6-Tribromophenol	45.9	30-130	
p-Terphenyl-d14	61.6	30-130	

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-B2 (5-10)

Sampled: 3/12/2019 13:05

Sample ID: 19C0480-23

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 20:07	TG
Aroclor-1221 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 20:07	TG
Aroclor-1232 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 20:07	TG
Aroclor-1242 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 20:07	TG
Aroclor-1248 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 20:07	TG
Aroclor-1254 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 20:07	TG
Aroclor-1260 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 20:07	TG
Aroclor-1262 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 20:07	TG
Aroclor-1268 [1]	ND	0.089	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 20:07	TG
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		75.5	30-150					3/18/19 20:07	
Decachlorobiphenyl [2]		76.0	30-150					3/18/19 20:07	
Tetrachloro-m-xylene [1]		90.0	30-150					3/18/19 20:07	
Tetrachloro-m-xylene [2]		87.9	30-150					3/18/19 20:07	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-B2 (5-10)

Sampled: 3/12/2019 13:05

Sample ID: 19C0480-23

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	510	91	mg/Kg dry	10		SW-846 8100 Modified	3/15/19	3/17/19 17:40	RMW
<b>Surrogates</b>		<b>% Recovery</b>	<b>Recovery Limits</b>		<b>Flag/Qual</b>				
2-Fluorobiphenyl		53.3	40-140					3/17/19 17:40	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-B2 (5-10)

Sampled: 3/12/2019 13:05

Sample ID: 19C0480-23

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.8	mg/Kg dry	1		SW-846 6010D	3/15/19	3/18/19 10:52	EJB
Arsenic	5.3	1.8	mg/Kg dry	1		SW-846 6010D	3/15/19	3/18/19 10:52	EJB
Barium	30	1.8	mg/Kg dry	1		SW-846 6010D	3/15/19	3/18/19 10:52	EJB
Beryllium	0.30	0.18	mg/Kg dry	1		SW-846 6010D	3/15/19	3/18/19 10:52	EJB
Cadmium	0.54	0.18	mg/Kg dry	1		SW-846 6010D	3/15/19	3/18/19 10:52	EJB
Chromium	15	0.37	mg/Kg dry	1		SW-846 6010D	3/15/19	3/18/19 10:52	EJB
Lead	53	0.55	mg/Kg dry	1		SW-846 6010D	3/15/19	3/18/19 10:52	EJB
Mercury	0.040	0.028	mg/Kg dry	1		SW-846 7471B	3/13/19	3/15/19 13:28	TBC
Nickel	12	0.37	mg/Kg dry	1		SW-846 6010D	3/15/19	3/18/19 10:52	EJB
Selenium	ND	3.7	mg/Kg dry	1		SW-846 6010D	3/15/19	3/18/19 10:52	EJB
Silver	ND	0.37	mg/Kg dry	1		SW-846 6010D	3/15/19	3/18/19 10:52	EJB
Thallium	ND	1.8	mg/Kg dry	1		SW-846 6010D	3/15/19	3/18/19 10:52	EJB
Vanadium	22	0.73	mg/Kg dry	1		SW-846 6010D	3/15/19	3/18/19 10:52	EJB
Zinc	46	0.73	mg/Kg dry	1		SW-846 6010D	3/15/19	3/18/19 10:52	EJB



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-B2 (5-10)

Sampled: 3/12/2019 13:05

Sample ID: 19C0480-23

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	90.2		% Wt	1		SM 2540G	3/18/19	3/18/19 19:51	KMG
Ignitability	Absent		present/absent	1		SW-846 1030	3/17/19	3/17/19 12:20	KMV
pH @23.2°C	7.8		pH Units	1		SW-846 9045C	3/12/19	3/12/19 19:10	AIA
Reactive Cyanide	ND	4.0	mg/Kg	1		SW-846 9014	3/15/19	3/16/19 11:40	KMV
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	3/15/19	3/16/19 10:43	KMV
Specific conductance	16	2.0	µmhos/cm	1		SM21-22 2510B Modified	3/15/19	3/15/19 12:21	EC

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-A1 (0-5)

Sampled: 3/12/2019 13:20

Sample ID: 19C0480-24

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.085	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:18	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00085	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:18	MFF
Benzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:18	MFF
Bromobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:18	MFF
Bromochloromethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:18	MFF
Bromodichloromethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:18	MFF
Bromoform	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:18	MFF
Bromomethane	ND	0.0085	mg/Kg dry	1	V-34	SW-846 8260C	3/14/19	3/14/19 21:18	MFF
2-Butanone (MEK)	ND	0.034	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:18	MFF
n-Butylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:18	MFF
sec-Butylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:18	MFF
tert-Butylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:18	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00085	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:18	MFF
Carbon Disulfide	ND	0.0051	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:18	MFF
Carbon Tetrachloride	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:18	MFF
Chlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:18	MFF
Chlorodibromomethane	ND	0.00085	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:18	MFF
Chloroethane	ND	0.0085	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:18	MFF
Chloroform	ND	0.0034	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:18	MFF
Chloromethane	ND	0.0085	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:18	MFF
2-Chlorotoluene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:18	MFF
4-Chlorotoluene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:18	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0034	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:18	MFF
1,2-Dibromoethane (EDB)	ND	0.00085	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:18	MFF
Dibromomethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:18	MFF
1,2-Dichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:18	MFF
1,3-Dichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:18	MFF
1,4-Dichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:18	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0085	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:18	MFF
1,1-Dichloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:18	MFF
1,2-Dichloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:18	MFF
1,1-Dichloroethylene	ND	0.0034	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:18	MFF
cis-1,2-Dichloroethylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:18	MFF
trans-1,2-Dichloroethylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:18	MFF
1,2-Dichloropropane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:18	MFF
1,3-Dichloropropane	ND	0.00085	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:18	MFF
2,2-Dichloropropane	ND	0.0017	mg/Kg dry	1	V-05	SW-846 8260C	3/14/19	3/14/19 21:18	MFF
1,1-Dichloropropene	ND	0.0034	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:18	MFF
cis-1,3-Dichloropropene	ND	0.00085	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:18	MFF
trans-1,3-Dichloropropene	ND	0.00085	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:18	MFF
Diethyl Ether	ND	0.0085	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:18	MFF
Diisopropyl Ether (DIPE)	ND	0.00085	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:18	MFF
1,4-Dioxane	ND	0.17	mg/Kg dry	1	V-05, V-16	SW-846 8260C	3/14/19	3/14/19 21:18	MFF
Ethylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:18	MFF

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-A1 (0-5)

Sampled: 3/12/2019 13:20

Sample ID: 19C0480-24

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:18	MFF
2-Hexanone (MBK)	ND	0.017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:18	MFF
Isopropylbenzene (Cumene)	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:18	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:18	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0034	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:18	MFF
Methylene Chloride	ND	0.0085	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:18	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:18	MFF
Naphthalene	ND	0.0034	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:18	MFF
n-Propylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:18	MFF
Styrene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:18	MFF
1,1,1,2-Tetrachloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:18	MFF
1,1,2,2-Tetrachloroethane	ND	0.00085	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:18	MFF
Tetrachloroethylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:18	MFF
Tetrahydrofuran	ND	0.0085	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:18	MFF
Toluene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:18	MFF
1,2,3-Trichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:18	MFF
1,2,4-Trichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:18	MFF
1,1,1-Trichloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:18	MFF
1,1,2-Trichloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:18	MFF
Trichloroethylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:18	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0085	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:18	MFF
1,2,3-Trichloropropane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:18	MFF
1,2,4-Trimethylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:18	MFF
1,3,5-Trimethylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:18	MFF
Vinyl Chloride	ND	0.0085	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:18	MFF
m+p Xylene	ND	0.0034	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:18	MFF
o-Xylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:18	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	90.0	70-130	
Toluene-d8	97.4	70-130	
4-Bromofluorobenzene	93.2	70-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-A1 (0-5)

Sampled: 3/12/2019 13:20

Sample ID: 19C0480-24

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.39	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:56	IMR
Acenaphthylene	ND	0.39	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:56	IMR
Acetophenone	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:56	IMR
Aniline	ND	0.77	mg/Kg dry	2	V-34	SW-846 8270D	3/15/19	3/18/19 18:56	IMR
Anthracene	ND	0.39	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:56	IMR
Benzo(a)anthracene	0.69	0.39	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:56	IMR
Benzo(a)pyrene	0.72	0.39	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:56	IMR
Benzo(b)fluoranthene	0.84	0.39	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:56	IMR
Benzo(g,h,i)perylene	0.44	0.39	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:56	IMR
Benzo(k)fluoranthene	ND	0.39	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:56	IMR
Bis(2-chloroethoxy)methane	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:56	IMR
Bis(2-chloroethyl)ether	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:56	IMR
Bis(2-chloroisopropyl)ether	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:56	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:56	IMR
4-Bromophenylphenylether	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:56	IMR
Butylbenzylphthalate	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:56	IMR
4-Chloroaniline	ND	1.5	mg/Kg dry	2	V-34	SW-846 8270D	3/15/19	3/18/19 18:56	IMR
2-Chloronaphthalene	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:56	IMR
2-Chlorophenol	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:56	IMR
Chrysene	0.66	0.39	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:56	IMR
Dibenz(a,h)anthracene	ND	0.39	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:56	IMR
Dibenzofuran	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:56	IMR
Di-n-butylphthalate	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:56	IMR
1,2-Dichlorobenzene	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:56	IMR
1,3-Dichlorobenzene	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:56	IMR
1,4-Dichlorobenzene	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:56	IMR
3,3-Dichlorobenzidine	ND	0.39	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:56	IMR
2,4-Dichlorophenol	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:56	IMR
Diethylphthalate	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:56	IMR
2,4-Dimethylphenol	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:56	IMR
Dimethylphthalate	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:56	IMR
2,4-Dinitrophenol	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:56	IMR
2,4-Dinitrotoluene	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:56	IMR
2,6-Dinitrotoluene	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:56	IMR
Di-n-octylphthalate	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:56	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:56	IMR
Fluoranthene	1.3	0.39	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:56	IMR
Fluorene	ND	0.39	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:56	IMR
Hexachlorobenzene	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:56	IMR
Hexachlorobutadiene	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:56	IMR
Hexachloroethane	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:56	IMR
Indeno(1,2,3-cd)pyrene	0.43	0.39	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:56	IMR
Isophorone	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:56	IMR
2-Methylnaphthalene	ND	0.39	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:56	IMR

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-A1 (0-5)

Sampled: 3/12/2019 13:20

Sample ID: 19C0480-24

Sample Matrix: Soil

Sample Flags: RL-08

**Semivolatile Organic Compounds by GC/MS**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:56	IMR
3/4-Methylphenol	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:56	IMR
Naphthalene	ND	0.39	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:56	IMR
Nitrobenzene	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:56	IMR
2-Nitrophenol	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:56	IMR
4-Nitrophenol	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:56	IMR
Pentachlorophenol	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:56	IMR
Phenanthrene	0.56	0.39	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:56	IMR
Phenol	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:56	IMR
Pyrene	1.4	0.39	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:56	IMR
1,2,4-Trichlorobenzene	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:56	IMR
2,4,5-Trichlorophenol	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:56	IMR
2,4,6-Trichlorophenol	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 18:56	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	47.3	30-130	
Phenol-d6	45.8	30-130	
Nitrobenzene-d5	46.4	30-130	
2-Fluorobiphenyl	48.1	30-130	
2,4,6-Tribromophenol	36.2	30-130	
p-Terphenyl-d14	56.1	30-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-A1 (0-5)

Sampled: 3/12/2019 13:20

Sample ID: 19C0480-24

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.091	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 20:19	TG
Aroclor-1221 [1]	ND	0.091	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 20:19	TG
Aroclor-1232 [1]	ND	0.091	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 20:19	TG
Aroclor-1242 [1]	ND	0.091	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 20:19	TG
Aroclor-1248 [1]	ND	0.091	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 20:19	TG
Aroclor-1254 [1]	ND	0.091	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 20:19	TG
Aroclor-1260 [1]	ND	0.091	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 20:19	TG
Aroclor-1262 [1]	ND	0.091	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 20:19	TG
Aroclor-1268 [1]	ND	0.091	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 20:19	TG
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		89.4	30-150					3/18/19 20:19	
Decachlorobiphenyl [2]		87.0	30-150					3/18/19 20:19	
Tetrachloro-m-xylene [1]		107	30-150					3/18/19 20:19	
Tetrachloro-m-xylene [2]		103	30-150					3/18/19 20:19	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-A1 (0-5)

Sampled: 3/12/2019 13:20

Sample ID: 19C0480-24

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	440	95	mg/Kg dry	10		SW-846 8100 Modified	3/15/19	3/17/19 18:00	RMW
<b>Surrogates</b>		<b>% Recovery</b>	<b>Recovery Limits</b>		<b>Flag/Qual</b>				
2-Fluorobiphenyl		42.4	40-140					3/17/19 18:00	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-A1 (0-5)

Sampled: 3/12/2019 13:20

Sample ID: 19C0480-24

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.8	mg/Kg dry	1		SW-846 6010D	3/15/19	3/18/19 10:57	EJB
Arsenic	6.8	1.8	mg/Kg dry	1		SW-846 6010D	3/15/19	3/18/19 10:57	EJB
Barium	37	1.8	mg/Kg dry	1		SW-846 6010D	3/15/19	3/18/19 10:57	EJB
Beryllium	0.33	0.18	mg/Kg dry	1		SW-846 6010D	3/15/19	3/18/19 10:57	EJB
Cadmium	0.51	0.18	mg/Kg dry	1		SW-846 6010D	3/15/19	3/18/19 10:57	EJB
Chromium	15	0.37	mg/Kg dry	1		SW-846 6010D	3/15/19	3/18/19 10:57	EJB
Lead	44	0.55	mg/Kg dry	1		SW-846 6010D	3/15/19	3/18/19 10:57	EJB
Mercury	0.051	0.028	mg/Kg dry	1		SW-846 7471B	3/13/19	3/15/19 13:29	TBC
Nickel	12	0.37	mg/Kg dry	1		SW-846 6010D	3/15/19	3/18/19 10:57	EJB
Selenium	ND	3.7	mg/Kg dry	1		SW-846 6010D	3/15/19	3/18/19 10:57	EJB
Silver	ND	0.37	mg/Kg dry	1		SW-846 6010D	3/15/19	3/18/19 10:57	EJB
Thallium	ND	1.8	mg/Kg dry	1		SW-846 6010D	3/15/19	3/18/19 10:57	EJB
Vanadium	25	0.73	mg/Kg dry	1		SW-846 6010D	3/15/19	3/18/19 10:57	EJB
Zinc	49	0.73	mg/Kg dry	1		SW-846 6010D	3/15/19	3/18/19 10:57	EJB



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-A1 (0-5)

Sampled: 3/12/2019 13:20

Sample ID: 19C0480-24

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	88.1		% Wt	1		SM 2540G	3/18/19	3/18/19 19:52	KMG
Ignitability	Absent		present/absent	1		SW-846 1030	3/17/19	3/17/19 12:20	KMV
pH @19.9°C	7.8		pH Units	1		SW-846 9045C	3/12/19	3/12/19 19:57	AIA
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	3/15/19	3/16/19 11:40	KMV
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	3/15/19	3/16/19 10:43	KMV
Specific conductance	12	2.0	µmhos/cm	1		SM21-22 2510B Modified	3/16/19	3/16/19 13:31	EC

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-A2 (5-10)

Sampled: 3/12/2019 14:05

Sample ID: 19C0480-25

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.083	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:46	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00083	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:46	MFF
Benzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:46	MFF
Bromobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:46	MFF
Bromochloromethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:46	MFF
Bromodichloromethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:46	MFF
Bromoform	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:46	MFF
Bromomethane	ND	0.0083	mg/Kg dry	1	V-34	SW-846 8260C	3/14/19	3/14/19 21:46	MFF
2-Butanone (MEK)	ND	0.033	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:46	MFF
n-Butylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:46	MFF
sec-Butylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:46	MFF
tert-Butylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:46	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00083	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:46	MFF
Carbon Disulfide	ND	0.0050	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:46	MFF
Carbon Tetrachloride	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:46	MFF
Chlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:46	MFF
Chlorodibromomethane	ND	0.00083	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:46	MFF
Chloroethane	ND	0.0083	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:46	MFF
Chloroform	ND	0.0033	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:46	MFF
Chloromethane	ND	0.0083	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:46	MFF
2-Chlorotoluene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:46	MFF
4-Chlorotoluene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:46	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0033	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:46	MFF
1,2-Dibromoethane (EDB)	ND	0.00083	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:46	MFF
Dibromomethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:46	MFF
1,2-Dichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:46	MFF
1,3-Dichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:46	MFF
1,4-Dichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:46	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0083	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:46	MFF
1,1-Dichloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:46	MFF
1,2-Dichloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:46	MFF
1,1-Dichloroethylene	ND	0.0033	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:46	MFF
cis-1,2-Dichloroethylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:46	MFF
trans-1,2-Dichloroethylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:46	MFF
1,2-Dichloropropane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:46	MFF
1,3-Dichloropropane	ND	0.00083	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:46	MFF
2,2-Dichloropropane	ND	0.0017	mg/Kg dry	1	V-05	SW-846 8260C	3/14/19	3/14/19 21:46	MFF
1,1-Dichloropropene	ND	0.0033	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:46	MFF
cis-1,3-Dichloropropene	ND	0.00083	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:46	MFF
trans-1,3-Dichloropropene	ND	0.00083	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:46	MFF
Diethyl Ether	ND	0.0083	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:46	MFF
Diisopropyl Ether (DIPE)	ND	0.00083	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:46	MFF
1,4-Dioxane	ND	0.17	mg/Kg dry	1	V-05, V-16	SW-846 8260C	3/14/19	3/14/19 21:46	MFF
Ethylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:46	MFF

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-A2 (5-10)

Sampled: 3/12/2019 14:05

Sample ID: 19C0480-25

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:46	MFF
2-Hexanone (MBK)	ND	0.017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:46	MFF
Isopropylbenzene (Cumene)	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:46	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:46	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0033	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:46	MFF
Methylene Chloride	ND	0.0083	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:46	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:46	MFF
Naphthalene	ND	0.0033	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:46	MFF
n-Propylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:46	MFF
Styrene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:46	MFF
1,1,1,2-Tetrachloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:46	MFF
1,1,2,2-Tetrachloroethane	ND	0.00083	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:46	MFF
Tetrachloroethylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:46	MFF
Tetrahydrofuran	ND	0.0083	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:46	MFF
Toluene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:46	MFF
1,2,3-Trichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:46	MFF
1,2,4-Trichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:46	MFF
1,1,1-Trichloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:46	MFF
1,1,2-Trichloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:46	MFF
Trichloroethylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:46	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0083	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:46	MFF
1,2,3-Trichloropropane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:46	MFF
1,2,4-Trimethylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:46	MFF
1,3,5-Trimethylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:46	MFF
Vinyl Chloride	ND	0.0083	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:46	MFF
m+p Xylene	ND	0.0033	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:46	MFF
o-Xylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 21:46	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	92.6	70-130	3/14/19 21:46
Toluene-d8	96.9	70-130	3/14/19 21:46
4-Bromofluorobenzene	96.8	70-130	3/14/19 21:46

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-A2 (5-10)

Sampled: 3/12/2019 14:05

Sample ID: 19C0480-25

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatiles Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.36	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 19:25	IMR
Acenaphthylene	ND	0.36	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 19:25	IMR
Acetophenone	ND	0.72	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 19:25	IMR
Aniline	ND	0.72	mg/Kg dry	2	V-34	SW-846 8270D	3/15/19	3/18/19 19:25	IMR
Anthracene	ND	0.36	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 19:25	IMR
Benzo(a)anthracene	1.3	0.36	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 19:25	IMR
Benzo(a)pyrene	1.4	0.36	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 19:25	IMR
Benzo(b)fluoranthene	1.6	0.36	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 19:25	IMR
Benzo(g,h,i)perylene	0.76	0.36	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 19:25	IMR
Benzo(k)fluoranthene	0.64	0.36	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 19:25	IMR
Bis(2-chloroethoxy)methane	ND	0.72	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 19:25	IMR
Bis(2-chloroethyl)ether	ND	0.72	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 19:25	IMR
Bis(2-chloroisopropyl)ether	ND	0.72	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 19:25	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.72	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 19:25	IMR
4-Bromophenylphenylether	ND	0.72	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 19:25	IMR
Butylbenzylphthalate	ND	0.72	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 19:25	IMR
4-Chloroaniline	ND	1.4	mg/Kg dry	2	V-34	SW-846 8270D	3/15/19	3/18/19 19:25	IMR
2-Chloronaphthalene	ND	0.72	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 19:25	IMR
2-Chlorophenol	ND	0.72	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 19:25	IMR
Chrysene	1.3	0.36	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 19:25	IMR
Dibenz(a,h)anthracene	ND	0.36	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 19:25	IMR
Dibenzofuran	ND	0.72	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 19:25	IMR
Di-n-butylphthalate	ND	0.72	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 19:25	IMR
1,2-Dichlorobenzene	ND	0.72	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 19:25	IMR
1,3-Dichlorobenzene	ND	0.72	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 19:25	IMR
1,4-Dichlorobenzene	ND	0.72	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 19:25	IMR
3,3-Dichlorobenzidine	ND	0.36	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 19:25	IMR
2,4-Dichlorophenol	ND	0.72	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 19:25	IMR
Diethylphthalate	ND	0.72	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 19:25	IMR
2,4-Dimethylphenol	ND	0.72	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 19:25	IMR
Dimethylphthalate	ND	0.72	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 19:25	IMR
2,4-Dinitrophenol	ND	1.4	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 19:25	IMR
2,4-Dinitrotoluene	ND	0.72	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 19:25	IMR
2,6-Dinitrotoluene	ND	0.72	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 19:25	IMR
Di-n-octylphthalate	ND	0.72	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 19:25	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.72	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 19:25	IMR
Fluoranthene	2.3	0.36	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 19:25	IMR
Fluorene	ND	0.36	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 19:25	IMR
Hexachlorobenzene	ND	0.72	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 19:25	IMR
Hexachlorobutadiene	ND	0.72	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 19:25	IMR
Hexachloroethane	ND	0.72	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 19:25	IMR
Indeno(1,2,3-cd)pyrene	0.81	0.36	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 19:25	IMR
Isophorone	ND	0.72	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 19:25	IMR
2-Methylnaphthalene	ND	0.36	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 19:25	IMR

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-A2 (5-10)

Sampled: 3/12/2019 14:05

Sample ID: 19C0480-25

Sample Matrix: Soil

Sample Flags: RL-08

**Semivolatile Organic Compounds by GC/MS**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	0.72	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 19:25	IMR
3/4-Methylphenol	ND	0.72	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 19:25	IMR
Naphthalene	ND	0.36	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 19:25	IMR
Nitrobenzene	ND	0.72	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 19:25	IMR
2-Nitrophenol	ND	0.72	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 19:25	IMR
4-Nitrophenol	ND	1.4	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 19:25	IMR
Pentachlorophenol	ND	0.72	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 19:25	IMR
Phenanthrene	1.1	0.36	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 19:25	IMR
Phenol	ND	0.72	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 19:25	IMR
Pyrene	2.5	0.36	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 19:25	IMR
1,2,4-Trichlorobenzene	ND	0.72	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 19:25	IMR
2,4,5-Trichlorophenol	ND	0.72	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 19:25	IMR
2,4,6-Trichlorophenol	ND	0.72	mg/Kg dry	2		SW-846 8270D	3/15/19	3/18/19 19:25	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	63.4	30-130	
Phenol-d6	62.0	30-130	
Nitrobenzene-d5	61.3	30-130	
2-Fluorobiphenyl	63.7	30-130	
2,4,6-Tribromophenol	60.2	30-130	
p-Terphenyl-d14	75.7	30-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-A2 (5-10)

Sampled: 3/12/2019 14:05

Sample ID: 19C0480-25

Sample Matrix: Soil

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 20:31	TG
Aroclor-1221 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 20:31	TG
Aroclor-1232 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 20:31	TG
Aroclor-1242 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 20:31	TG
Aroclor-1248 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 20:31	TG
Aroclor-1254 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 20:31	TG
Aroclor-1260 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 20:31	TG
Aroclor-1262 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 20:31	TG
Aroclor-1268 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 20:31	TG
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		92.2	30-150					3/18/19 20:31	
Decachlorobiphenyl [2]		89.0	30-150					3/18/19 20:31	
Tetrachloro-m-xylene [1]		110	30-150					3/18/19 20:31	
Tetrachloro-m-xylene [2]		107	30-150					3/18/19 20:31	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-A2 (5-10)

Sampled: 3/12/2019 14:05

Sample ID: 19C0480-25

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	590	88	mg/Kg dry	10		SW-846 8100 Modified	3/15/19	3/17/19 18:20	RMW
<b>Surrogates</b>		<b>% Recovery</b>	<b>Recovery Limits</b>		<b>Flag/Qual</b>				
2-Fluorobiphenyl		52.6	40-140					3/17/19 18:20	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-A2 (5-10)

Sampled: 3/12/2019 14:05

Sample ID: 19C0480-25

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.7	mg/Kg dry	1		SW-846 6010D	3/15/19	3/18/19 11:02	EJB
Arsenic	3.9	1.7	mg/Kg dry	1		SW-846 6010D	3/15/19	3/18/19 11:02	EJB
Barium	37	1.7	mg/Kg dry	1		SW-846 6010D	3/15/19	3/18/19 11:02	EJB
Beryllium	0.33	0.17	mg/Kg dry	1		SW-846 6010D	3/15/19	3/18/19 11:02	EJB
Cadmium	0.29	0.17	mg/Kg dry	1		SW-846 6010D	3/15/19	3/18/19 11:02	EJB
Chromium	17	0.35	mg/Kg dry	1		SW-846 6010D	3/15/19	3/18/19 11:02	EJB
Lead	43	0.52	mg/Kg dry	1		SW-846 6010D	3/15/19	3/18/19 11:02	EJB
Mercury	0.032	0.026	mg/Kg dry	1		SW-846 7471B	3/13/19	3/15/19 13:31	TBC
Nickel	13	0.35	mg/Kg dry	1		SW-846 6010D	3/15/19	3/18/19 11:02	EJB
Selenium	ND	3.5	mg/Kg dry	1		SW-846 6010D	3/15/19	3/18/19 11:02	EJB
Silver	ND	0.35	mg/Kg dry	1		SW-846 6010D	3/15/19	3/18/19 11:02	EJB
Thallium	ND	1.7	mg/Kg dry	1		SW-846 6010D	3/15/19	3/18/19 11:02	EJB
Vanadium	30	0.70	mg/Kg dry	1		SW-846 6010D	3/15/19	3/18/19 11:02	EJB
Zinc	50	0.70	mg/Kg dry	1		SW-846 6010D	3/15/19	3/18/19 11:02	EJB



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-A2 (5-10)

Sampled: 3/12/2019 14:05

Sample ID: 19C0480-25

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	93.9		% Wt	1		SM 2540G	3/18/19	3/18/19 19:52	KMG
Ignitability	Absent		present/absent	1		SW-846 1030	3/17/19	3/17/19 12:20	KMV
pH @21.3°C	8.7		pH Units	1		SW-846 9045C	3/12/19	3/12/19 19:10	AIA
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	3/15/19	3/16/19 11:40	KMV
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	3/15/19	3/16/19 10:43	KMV
Specific conductance	37	2.0	µmhos/cm	1		SM21-22 2510B Modified	3/16/19	3/16/19 13:31	EC

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-A1 (5-10)

Sampled: 3/12/2019 13:25

Sample ID: 19C0480-26

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.091	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:13	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00091	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:13	MFF
Benzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:13	MFF
Bromobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:13	MFF
Bromochloromethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:13	MFF
Bromodichloromethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:13	MFF
Bromoform	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:13	MFF
Bromomethane	ND	0.0091	mg/Kg dry	1	V-34	SW-846 8260C	3/14/19	3/14/19 22:13	MFF
2-Butanone (MEK)	ND	0.036	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:13	MFF
n-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:13	MFF
sec-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:13	MFF
tert-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:13	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00091	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:13	MFF
Carbon Disulfide	ND	0.0055	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:13	MFF
Carbon Tetrachloride	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:13	MFF
Chlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:13	MFF
Chlorodibromomethane	ND	0.00091	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:13	MFF
Chloroethane	ND	0.0091	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:13	MFF
Chloroform	ND	0.0036	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:13	MFF
Chloromethane	ND	0.0091	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:13	MFF
2-Chlorotoluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:13	MFF
4-Chlorotoluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:13	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0036	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:13	MFF
1,2-Dibromoethane (EDB)	ND	0.00091	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:13	MFF
Dibromomethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:13	MFF
1,2-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:13	MFF
1,3-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:13	MFF
1,4-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:13	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0091	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:13	MFF
1,1-Dichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:13	MFF
1,2-Dichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:13	MFF
1,1-Dichloroethylene	ND	0.0036	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:13	MFF
cis-1,2-Dichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:13	MFF
trans-1,2-Dichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:13	MFF
1,2-Dichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:13	MFF
1,3-Dichloropropane	ND	0.00091	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:13	MFF
2,2-Dichloropropane	ND	0.0018	mg/Kg dry	1	V-05	SW-846 8260C	3/14/19	3/14/19 22:13	MFF
1,1-Dichloropropene	ND	0.0036	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:13	MFF
cis-1,3-Dichloropropene	ND	0.00091	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:13	MFF
trans-1,3-Dichloropropene	ND	0.00091	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:13	MFF
Diethyl Ether	ND	0.0091	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:13	MFF
Diisopropyl Ether (DIPE)	ND	0.00091	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:13	MFF
1,4-Dioxane	ND	0.18	mg/Kg dry	1	V-05, V-16	SW-846 8260C	3/14/19	3/14/19 22:13	MFF
Ethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:13	MFF

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-A1 (5-10)

Sampled: 3/12/2019 13:25

Sample ID: 19C0480-26

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:13	MFF
2-Hexanone (MBK)	ND	0.018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:13	MFF
Isopropylbenzene (Cumene)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:13	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:13	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0036	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:13	MFF
Methylene Chloride	ND	0.0091	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:13	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:13	MFF
Naphthalene	ND	0.0036	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:13	MFF
n-Propylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:13	MFF
Styrene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:13	MFF
1,1,1,2-Tetrachloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:13	MFF
1,1,2,2-Tetrachloroethane	ND	0.00091	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:13	MFF
Tetrachloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:13	MFF
Tetrahydrofuran	ND	0.0091	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:13	MFF
Toluene	0.0019	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:13	MFF
1,2,3-Trichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:13	MFF
1,2,4-Trichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:13	MFF
1,1,1-Trichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:13	MFF
1,1,2-Trichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:13	MFF
Trichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:13	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0091	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:13	MFF
1,2,3-Trichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:13	MFF
1,2,4-Trimethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:13	MFF
1,3,5-Trimethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:13	MFF
Vinyl Chloride	ND	0.0091	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:13	MFF
m+p Xylene	ND	0.0036	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:13	MFF
o-Xylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:13	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	89.9	70-130	3/14/19 22:13
Toluene-d8	98.7	70-130	3/14/19 22:13
4-Bromofluorobenzene	96.8	70-130	3/14/19 22:13

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-A1 (5-10)

Sampled: 3/12/2019 13:25

Sample ID: 19C0480-26

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.20	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:40	BGL
Acenaphthylene	ND	0.20	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:40	BGL
Acetophenone	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:40	BGL
Aniline	ND	0.39	mg/Kg dry	1	V-34	SW-846 8270D	3/15/19	3/20/19 8:40	BGL
Anthracene	ND	0.20	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:40	BGL
Benzo(a)anthracene	0.36	0.20	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:40	BGL
Benzo(a)pyrene	0.40	0.20	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:40	BGL
Benzo(b)fluoranthene	0.45	0.20	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:40	BGL
Benzo(g,h,i)perylene	0.26	0.20	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:40	BGL
Benzo(k)fluoranthene	ND	0.20	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:40	BGL
Bis(2-chloroethoxy)methane	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:40	BGL
Bis(2-chloroethyl)ether	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:40	BGL
Bis(2-chloroisopropyl)ether	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:40	BGL
Bis(2-Ethylhexyl)phthalate	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:40	BGL
4-Bromophenylphenylether	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:40	BGL
Butylbenzylphthalate	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:40	BGL
4-Chloroaniline	ND	0.76	mg/Kg dry	1	V-34	SW-846 8270D	3/15/19	3/20/19 8:40	BGL
2-Chloronaphthalene	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:40	BGL
2-Chlorophenol	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:40	BGL
Chrysene	0.39	0.20	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:40	BGL
Dibenz(a,h)anthracene	ND	0.20	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:40	BGL
Dibenzofuran	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:40	BGL
Di-n-butylphthalate	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:40	BGL
1,2-Dichlorobenzene	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:40	BGL
1,3-Dichlorobenzene	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:40	BGL
1,4-Dichlorobenzene	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:40	BGL
3,3-Dichlorobenzidine	ND	0.20	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:40	BGL
2,4-Dichlorophenol	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:40	BGL
Diethylphthalate	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:40	BGL
2,4-Dimethylphenol	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:40	BGL
Dimethylphthalate	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:40	BGL
2,4-Dinitrophenol	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:40	BGL
2,4-Dinitrotoluene	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:40	BGL
2,6-Dinitrotoluene	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:40	BGL
Di-n-octylphthalate	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:40	BGL
1,2-Diphenylhydrazine/Azobenzene	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:40	BGL
Fluoranthene	0.62	0.20	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:40	BGL
Fluorene	ND	0.20	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:40	BGL
Hexachlorobenzene	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:40	BGL
Hexachlorobutadiene	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:40	BGL
Hexachloroethane	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:40	BGL
Indeno(1,2,3-cd)pyrene	0.27	0.20	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:40	BGL
Isophorone	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:40	BGL
2-Methylnaphthalene	ND	0.20	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:40	BGL

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-A1 (5-10)

Sampled: 3/12/2019 13:25

Sample ID: 19C0480-26

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:40	BGL
3/4-Methylphenol	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:40	BGL
Naphthalene	ND	0.20	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:40	BGL
Nitrobenzene	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:40	BGL
2-Nitrophenol	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:40	BGL
4-Nitrophenol	ND	0.76	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:40	BGL
Pentachlorophenol	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:40	BGL
Phenanthrene	0.28	0.20	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:40	BGL
Phenol	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:40	BGL
Pyrene	0.75	0.20	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:40	BGL
1,2,4-Trichlorobenzene	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:40	BGL
2,4,5-Trichlorophenol	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:40	BGL
2,4,6-Trichlorophenol	ND	0.39	mg/Kg dry	1		SW-846 8270D	3/15/19	3/20/19 8:40	BGL
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2-Fluorophenol		51.3	30-130					3/20/19 8:40	
Phenol-d6		52.6	30-130					3/20/19 8:40	
Nitrobenzene-d5		47.8	30-130					3/20/19 8:40	
2-Fluorobiphenyl		50.5	30-130					3/20/19 8:40	
2,4,6-Tribromophenol		54.3	30-130					3/20/19 8:40	
p-Terphenyl-d14		57.4	30-130					3/20/19 8:40	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-A1 (5-10)

Sampled: 3/12/2019 13:25

Sample ID: 19C0480-26

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.093	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 20:44	TG
Aroclor-1221 [1]	ND	0.093	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 20:44	TG
Aroclor-1232 [1]	ND	0.093	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 20:44	TG
Aroclor-1242 [1]	ND	0.093	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 20:44	TG
Aroclor-1248 [1]	ND	0.093	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 20:44	TG
Aroclor-1254 [1]	ND	0.093	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 20:44	TG
Aroclor-1260 [1]	ND	0.093	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 20:44	TG
Aroclor-1262 [1]	ND	0.093	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 20:44	TG
Aroclor-1268 [1]	ND	0.093	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 20:44	TG
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		98.7	30-150					3/18/19 20:44	
Decachlorobiphenyl [2]		94.6	30-150					3/18/19 20:44	
Tetrachloro-m-xylene [1]		118	30-150					3/18/19 20:44	
Tetrachloro-m-xylene [2]		114	30-150					3/18/19 20:44	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Sampled: 3/12/2019 13:25

Field Sample #: TP-A1 (5-10)

Sample ID: 19C0480-26

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	530	96	mg/Kg dry	10		SW-846 8100 Modified	3/15/19	3/17/19 18:39	RMW
<b>Surrogates</b>		<b>% Recovery</b>	<b>Recovery Limits</b>		<b>Flag/Qual</b>				
2-Fluorobiphenyl		45.5	40-140					3/17/19 18:39	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-A1 (5-10)

Sampled: 3/12/2019 13:25

Sample ID: 19C0480-26

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.9	mg/Kg dry	1		SW-846 6010D	3/15/19	3/18/19 11:07	EJB
Arsenic	5.8	1.9	mg/Kg dry	1		SW-846 6010D	3/15/19	3/18/19 11:07	EJB
Barium	31	1.9	mg/Kg dry	1		SW-846 6010D	3/15/19	3/18/19 11:07	EJB
Beryllium	0.38	0.19	mg/Kg dry	1		SW-846 6010D	3/15/19	3/18/19 11:07	EJB
Cadmium	0.38	0.19	mg/Kg dry	1		SW-846 6010D	3/15/19	3/18/19 11:07	EJB
Chromium	15	0.38	mg/Kg dry	1		SW-846 6010D	3/15/19	3/18/19 11:07	EJB
Lead	25	0.57	mg/Kg dry	1		SW-846 6010D	3/15/19	3/18/19 11:07	EJB
Mercury	0.029	0.029	mg/Kg dry	1		SW-846 7471B	3/13/19	3/15/19 13:33	TBC
Nickel	12	0.38	mg/Kg dry	1		SW-846 6010D	3/15/19	3/18/19 11:07	EJB
Selenium	ND	3.8	mg/Kg dry	1		SW-846 6010D	3/15/19	3/18/19 11:07	EJB
Silver	ND	0.38	mg/Kg dry	1		SW-846 6010D	3/15/19	3/18/19 11:07	EJB
Thallium	ND	1.9	mg/Kg dry	1		SW-846 6010D	3/15/19	3/18/19 11:07	EJB
Vanadium	26	0.75	mg/Kg dry	1		SW-846 6010D	3/15/19	3/18/19 11:07	EJB
Zinc	39	0.75	mg/Kg dry	1		SW-846 6010D	3/15/19	3/18/19 11:07	EJB



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-A1 (5-10)

Sampled: 3/12/2019 13:25

Sample ID: 19C0480-26

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	86.2		% Wt	1		SM 2540G	3/18/19	3/18/19 19:52	KMG
Ignitability	Absent		present/absent	1		SW-846 1030	3/17/19	3/17/19 12:20	KMV
pH @20.6°C	7.6		pH Units	1		SW-846 9045C	3/12/19	3/12/19 19:10	AIA
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	3/15/19	3/16/19 11:40	KMV
Reactive Sulfide	ND	19	mg/Kg	1		SW-846 9030A	3/15/19	3/16/19 10:43	KMV
Specific conductance	13	2.0	µmhos/cm	1		SM21-22 2510B Modified	3/16/19	3/16/19 13:31	EC

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-A2 (0-5)

Sampled: 3/12/2019 14:00

Sample ID: 19C0480-27

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.088	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:40	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00088	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:40	MFF
Benzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:40	MFF
Bromobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:40	MFF
Bromochloromethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:40	MFF
Bromodichloromethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:40	MFF
Bromoform	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:40	MFF
Bromomethane	ND	0.0088	mg/Kg dry	1	V-34	SW-846 8260C	3/14/19	3/14/19 22:40	MFF
2-Butanone (MEK)	ND	0.035	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:40	MFF
n-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:40	MFF
sec-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:40	MFF
tert-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:40	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00088	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:40	MFF
Carbon Disulfide	ND	0.0053	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:40	MFF
Carbon Tetrachloride	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:40	MFF
Chlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:40	MFF
Chlorodibromomethane	ND	0.00088	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:40	MFF
Chloroethane	ND	0.0088	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:40	MFF
Chloroform	ND	0.0035	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:40	MFF
Chloromethane	ND	0.0088	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:40	MFF
2-Chlorotoluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:40	MFF
4-Chlorotoluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:40	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0035	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:40	MFF
1,2-Dibromoethane (EDB)	ND	0.00088	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:40	MFF
Dibromomethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:40	MFF
1,2-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:40	MFF
1,3-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:40	MFF
1,4-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:40	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0088	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:40	MFF
1,1-Dichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:40	MFF
1,2-Dichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:40	MFF
1,1-Dichloroethylene	ND	0.0035	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:40	MFF
cis-1,2-Dichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:40	MFF
trans-1,2-Dichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:40	MFF
1,2-Dichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:40	MFF
1,3-Dichloropropane	ND	0.00088	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:40	MFF
2,2-Dichloropropane	ND	0.0018	mg/Kg dry	1	V-05	SW-846 8260C	3/14/19	3/14/19 22:40	MFF
1,1-Dichloropropene	ND	0.0035	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:40	MFF
cis-1,3-Dichloropropene	ND	0.00088	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:40	MFF
trans-1,3-Dichloropropene	ND	0.00088	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:40	MFF
Diethyl Ether	ND	0.0088	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:40	MFF
Diisopropyl Ether (DIPE)	ND	0.00088	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:40	MFF
1,4-Dioxane	ND	0.18	mg/Kg dry	1	V-05, V-16	SW-846 8260C	3/14/19	3/14/19 22:40	MFF
Ethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:40	MFF

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-A2 (0-5)

Sampled: 3/12/2019 14:00

Sample ID: 19C0480-27

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:40	MFF
2-Hexanone (MBK)	ND	0.018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:40	MFF
Isopropylbenzene (Cumene)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:40	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:40	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0035	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:40	MFF
Methylene Chloride	ND	0.0088	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:40	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:40	MFF
Naphthalene	ND	0.0035	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:40	MFF
n-Propylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:40	MFF
Styrene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:40	MFF
1,1,1,2-Tetrachloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:40	MFF
1,1,2,2-Tetrachloroethane	ND	0.00088	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:40	MFF
Tetrachloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:40	MFF
Tetrahydrofuran	ND	0.0088	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:40	MFF
Toluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:40	MFF
1,2,3-Trichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:40	MFF
1,2,4-Trichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:40	MFF
1,1,1-Trichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:40	MFF
1,1,2-Trichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:40	MFF
Trichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:40	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0088	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:40	MFF
1,2,3-Trichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:40	MFF
1,2,4-Trimethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:40	MFF
1,3,5-Trimethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:40	MFF
Vinyl Chloride	ND	0.0088	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:40	MFF
m+p Xylene	ND	0.0035	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:40	MFF
o-Xylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 22:40	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	89.4	70-130	
Toluene-d8	99.2	70-130	
4-Bromofluorobenzene	96.6	70-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-A2 (0-5)

Sampled: 3/12/2019 14:00

Sample ID: 19C0480-27

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatiles Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.76	mg/Kg dry	4		SW-846 8270D	3/15/19	3/18/19 20:23	IMR
Acenaphthylene	ND	0.76	mg/Kg dry	4		SW-846 8270D	3/15/19	3/18/19 20:23	IMR
Acetophenone	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/15/19	3/18/19 20:23	IMR
Aniline	ND	1.5	mg/Kg dry	4	V-34	SW-846 8270D	3/15/19	3/18/19 20:23	IMR
Anthracene	ND	0.76	mg/Kg dry	4		SW-846 8270D	3/15/19	3/18/19 20:23	IMR
Benzo(a)anthracene	ND	0.76	mg/Kg dry	4		SW-846 8270D	3/15/19	3/18/19 20:23	IMR
Benzo(a)pyrene	ND	0.76	mg/Kg dry	4		SW-846 8270D	3/15/19	3/18/19 20:23	IMR
Benzo(b)fluoranthene	0.77	0.76	mg/Kg dry	4		SW-846 8270D	3/15/19	3/18/19 20:23	IMR
Benzo(g,h,i)perylene	ND	0.76	mg/Kg dry	4		SW-846 8270D	3/15/19	3/18/19 20:23	IMR
Benzo(k)fluoranthene	ND	0.76	mg/Kg dry	4		SW-846 8270D	3/15/19	3/18/19 20:23	IMR
Bis(2-chloroethoxy)methane	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/15/19	3/18/19 20:23	IMR
Bis(2-chloroethyl)ether	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/15/19	3/18/19 20:23	IMR
Bis(2-chloroisopropyl)ether	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/15/19	3/18/19 20:23	IMR
Bis(2-Ethylhexyl)phthalate	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/15/19	3/18/19 20:23	IMR
4-Bromophenylphenylether	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/15/19	3/18/19 20:23	IMR
Butylbenzylphthalate	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/15/19	3/18/19 20:23	IMR
4-Chloroaniline	ND	2.9	mg/Kg dry	4	V-34	SW-846 8270D	3/15/19	3/18/19 20:23	IMR
2-Chloronaphthalene	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/15/19	3/18/19 20:23	IMR
2-Chlorophenol	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/15/19	3/18/19 20:23	IMR
Chrysene	ND	0.76	mg/Kg dry	4		SW-846 8270D	3/15/19	3/18/19 20:23	IMR
Dibenz(a,h)anthracene	ND	0.76	mg/Kg dry	4		SW-846 8270D	3/15/19	3/18/19 20:23	IMR
Dibenzofuran	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/15/19	3/18/19 20:23	IMR
Di-n-butylphthalate	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/15/19	3/18/19 20:23	IMR
1,2-Dichlorobenzene	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/15/19	3/18/19 20:23	IMR
1,3-Dichlorobenzene	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/15/19	3/18/19 20:23	IMR
1,4-Dichlorobenzene	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/15/19	3/18/19 20:23	IMR
3,3-Dichlorobenzidine	ND	0.76	mg/Kg dry	4		SW-846 8270D	3/15/19	3/18/19 20:23	IMR
2,4-Dichlorophenol	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/15/19	3/18/19 20:23	IMR
Diethylphthalate	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/15/19	3/18/19 20:23	IMR
2,4-Dimethylphenol	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/15/19	3/18/19 20:23	IMR
Dimethylphthalate	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/15/19	3/18/19 20:23	IMR
2,4-Dinitrophenol	ND	2.9	mg/Kg dry	4		SW-846 8270D	3/15/19	3/18/19 20:23	IMR
2,4-Dinitrotoluene	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/15/19	3/18/19 20:23	IMR
2,6-Dinitrotoluene	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/15/19	3/18/19 20:23	IMR
Di-n-octylphthalate	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/15/19	3/18/19 20:23	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/15/19	3/18/19 20:23	IMR
Fluoranthene	0.94	0.76	mg/Kg dry	4		SW-846 8270D	3/15/19	3/18/19 20:23	IMR
Fluorene	ND	0.76	mg/Kg dry	4		SW-846 8270D	3/15/19	3/18/19 20:23	IMR
Hexachlorobenzene	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/15/19	3/18/19 20:23	IMR
Hexachlorobutadiene	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/15/19	3/18/19 20:23	IMR
Hexachloroethane	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/15/19	3/18/19 20:23	IMR
Indeno(1,2,3-cd)pyrene	ND	0.76	mg/Kg dry	4		SW-846 8270D	3/15/19	3/18/19 20:23	IMR
Isophorone	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/15/19	3/18/19 20:23	IMR
2-Methylnaphthalene	ND	0.76	mg/Kg dry	4		SW-846 8270D	3/15/19	3/18/19 20:23	IMR

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-A2 (0-5)

Sampled: 3/12/2019 14:00

Sample ID: 19C0480-27

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/15/19	3/18/19 20:23	IMR
3/4-Methylphenol	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/15/19	3/18/19 20:23	IMR
Naphthalene	ND	0.76	mg/Kg dry	4		SW-846 8270D	3/15/19	3/18/19 20:23	IMR
Nitrobenzene	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/15/19	3/18/19 20:23	IMR
2-Nitrophenol	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/15/19	3/18/19 20:23	IMR
4-Nitrophenol	ND	2.9	mg/Kg dry	4		SW-846 8270D	3/15/19	3/18/19 20:23	IMR
Pentachlorophenol	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/15/19	3/18/19 20:23	IMR
Phenanthrene	ND	0.76	mg/Kg dry	4		SW-846 8270D	3/15/19	3/18/19 20:23	IMR
Phenol	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/15/19	3/18/19 20:23	IMR
Pyrene	1.3	0.76	mg/Kg dry	4		SW-846 8270D	3/15/19	3/18/19 20:23	IMR
1,2,4-Trichlorobenzene	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/15/19	3/18/19 20:23	IMR
2,4,5-Trichlorophenol	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/15/19	3/18/19 20:23	IMR
2,4,6-Trichlorophenol	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/15/19	3/18/19 20:23	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	50.6	30-130	
Phenol-d6	49.1	30-130	
Nitrobenzene-d5	49.0	30-130	
2-Fluorobiphenyl	52.9	30-130	
2,4,6-Tribromophenol	47.7	30-130	
p-Terphenyl-d14	62.4	30-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-A2 (0-5)

Sampled: 3/12/2019 14:00

Sample ID: 19C0480-27

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.091	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 20:56	TG
Aroclor-1221 [1]	ND	0.091	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 20:56	TG
Aroclor-1232 [1]	ND	0.091	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 20:56	TG
Aroclor-1242 [1]	ND	0.091	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 20:56	TG
Aroclor-1248 [1]	ND	0.091	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 20:56	TG
Aroclor-1254 [1]	ND	0.091	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 20:56	TG
Aroclor-1260 [1]	ND	0.091	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 20:56	TG
Aroclor-1262 [1]	ND	0.091	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 20:56	TG
Aroclor-1268 [1]	ND	0.091	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 20:56	TG
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		89.9	30-150					3/18/19 20:56	
Decachlorobiphenyl [2]		86.0	30-150					3/18/19 20:56	
Tetrachloro-m-xylene [1]		110	30-150					3/18/19 20:56	
Tetrachloro-m-xylene [2]		107	30-150					3/18/19 20:56	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-A2 (0-5)

Sampled: 3/12/2019 14:00

Sample ID: 19C0480-27

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	410	93	mg/Kg dry	10		SW-846 8100 Modified	3/15/19	3/18/19 0:20	RMW
<b>Surrogates</b>		<b>% Recovery</b>	<b>Recovery Limits</b>		<b>Flag/Qual</b>				
2-Fluorobiphenyl		41.0	40-140					3/18/19 0:20	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-A2 (0-5)

Sampled: 3/12/2019 14:00

Sample ID: 19C0480-27

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.8	mg/Kg dry	1		SW-846 6010D	3/15/19	3/18/19 11:12	EJB
Arsenic	7.6	1.8	mg/Kg dry	1		SW-846 6010D	3/15/19	3/18/19 11:12	EJB
Barium	34	1.8	mg/Kg dry	1		SW-846 6010D	3/15/19	3/18/19 11:12	EJB
Beryllium	0.38	0.18	mg/Kg dry	1		SW-846 6010D	3/15/19	3/18/19 11:12	EJB
Cadmium	0.47	0.18	mg/Kg dry	1		SW-846 6010D	3/15/19	3/18/19 11:12	EJB
Chromium	15	0.37	mg/Kg dry	1		SW-846 6010D	3/15/19	3/18/19 11:12	EJB
Lead	58	0.55	mg/Kg dry	1		SW-846 6010D	3/15/19	3/18/19 11:12	EJB
Mercury	0.048	0.028	mg/Kg dry	1		SW-846 7471B	3/13/19	3/15/19 13:34	TBC
Nickel	11	0.37	mg/Kg dry	1		SW-846 6010D	3/15/19	3/18/19 11:12	EJB
Selenium	ND	3.7	mg/Kg dry	1		SW-846 6010D	3/15/19	3/18/19 11:12	EJB
Silver	ND	0.37	mg/Kg dry	1		SW-846 6010D	3/15/19	3/18/19 11:12	EJB
Thallium	ND	1.8	mg/Kg dry	1		SW-846 6010D	3/15/19	3/18/19 11:12	EJB
Vanadium	21	0.73	mg/Kg dry	1		SW-846 6010D	3/15/19	3/18/19 11:12	EJB
Zinc	49	0.73	mg/Kg dry	1		SW-846 6010D	3/15/19	3/18/19 11:12	EJB



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

Project Location: Wayland, MA

Sample Description:

Work Order: 19C0480

Date Received: 3/12/2019

Field Sample #: TP-A2 (0-5)

Sampled: 3/12/2019 14:00

Sample ID: 19C0480-27

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	88.0		% Wt	1		SM 2540G	3/18/19	3/18/19 19:52	KMG
Ignitability	Absent		present/absent	1		SW-846 1030	3/17/19	3/17/19 12:20	KMV
pH @21°C	7.9		pH Units	1		SW-846 9045C	3/12/19	3/12/19 20:38	AIA
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	3/15/19	3/16/19 11:40	KMV
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	3/15/19	3/16/19 10:43	KMV
Specific conductance	13	2.0	µmhos/cm	1		SM21-22 2510B Modified	3/16/19	3/16/19 13:31	EC

**Sample Extraction Data**

**Prep Method: % Solids-SM 2540G**

Lab Number [Field ID]	Batch	Date
19C0480-01 [TP-C3 (0-5)]	B225994	03/18/19
19C0480-02 [TP-C3 (5-10)]	B225994	03/18/19
19C0480-03 [TP-D3 (0-5)]	B225994	03/18/19
19C0480-04 [TP-D3 (5-10)]	B225994	03/18/19
19C0480-05 [TP-D3 (10-15)]	B225994	03/18/19
19C0480-06 [TP-E3 (0-5)]	B225994	03/18/19
19C0480-07 [TP-E3 (5-10)]	B225994	03/18/19
19C0480-08 [TP-F3 (0-5)]	B225994	03/18/19
19C0480-09 [TP-F3 (5-10)]	B225994	03/18/19
19C0480-10 [TP-E2 (0-5)]	B225994	03/18/19
19C0480-11 [TP-E2 (5-10)]	B225994	03/18/19
19C0480-12 [TP-D2 (0-5)]	B225994	03/18/19
19C0480-13 [TP-D2 (5-10)]	B225994	03/18/19
19C0480-14 [TP-C2 (0-5)]	B225994	03/18/19
19C0480-15 [TP-C2 (5-10)]	B225994	03/18/19
19C0480-16 [TP-D1 (0-5)]	B225994	03/18/19
19C0480-17 [TP-D1 (5-10)]	B225994	03/18/19
19C0480-18 [TP-C1 (0-5)]	B225994	03/18/19
19C0480-19 [TP-C1 (5-10)]	B225994	03/18/19
19C0480-20 [TP-B1 (0-5)]	B225994	03/18/19
19C0480-21 [TP-B1 (5-10)]	B225994	03/18/19
19C0480-22 [TP-B2 (0-5)]	B225994	03/18/19
19C0480-23 [TP-B2 (5-10)]	B225994	03/18/19
19C0480-24 [TP-A1 (0-5)]	B225994	03/18/19
19C0480-25 [TP-A2 (5-10)]	B225994	03/18/19
19C0480-26 [TP-A1 (5-10)]	B225994	03/18/19
19C0480-27 [TP-A2 (0-5)]	B225994	03/18/19

**SM21-22 2510B Modified**

Lab Number [Field ID]	Batch	Initial [g]	Date
19C0480-01 [TP-C3 (0-5)]	B225720	1.00	03/14/19
19C0480-02 [TP-C3 (5-10)]	B225720	1.00	03/14/19
19C0480-03 [TP-D3 (0-5)]	B225720	1.00	03/14/19
19C0480-04 [TP-D3 (5-10)]	B225720	1.00	03/14/19
19C0480-05 [TP-D3 (10-15)]	B225720	1.00	03/14/19
19C0480-06 [TP-E3 (0-5)]	B225720	1.00	03/14/19
19C0480-07 [TP-E3 (5-10)]	B225720	1.00	03/14/19
19C0480-08 [TP-F3 (0-5)]	B225720	1.00	03/14/19
19C0480-09 [TP-F3 (5-10)]	B225720	1.00	03/14/19
19C0480-10 [TP-E2 (0-5)]	B225720	1.00	03/14/19

**SM21-22 2510B Modified**

Lab Number [Field ID]	Batch	Initial [g]	Date
19C0480-11 [TP-E2 (5-10)]	B225855	1.00	03/15/19
19C0480-12 [TP-D2 (0-5)]	B225855	1.00	03/15/19
19C0480-13 [TP-D2 (5-10)]	B225855	1.00	03/15/19
19C0480-14 [TP-C2 (0-5)]	B225855	1.00	03/15/19
19C0480-15 [TP-C2 (5-10)]	B225855	1.00	03/15/19
19C0480-16 [TP-D1 (0-5)]	B225855	1.00	03/15/19
19C0480-17 [TP-D1 (5-10)]	B225855	1.00	03/15/19
19C0480-18 [TP-C1 (0-5)]	B225855	1.00	03/15/19

**Sample Extraction Data**

**SM21-22 2510B Modified**

Lab Number [Field ID]	Batch	Initial [g]	Date
19C0480-19 [TP-C1 (5-10)]	B225855	1.00	03/15/19
19C0480-20 [TP-B1 (0-5)]	B225855	1.00	03/15/19
19C0480-21 [TP-B1 (5-10)]	B225855	1.00	03/15/19
19C0480-22 [TP-B2 (0-5)]	B225855	1.00	03/15/19
19C0480-23 [TP-B2 (5-10)]	B225855	1.00	03/15/19

**SM21-22 2510B Modified**

Lab Number [Field ID]	Batch	Initial [g]	Date
19C0480-24 [TP-A1 (0-5)]	B225914	1.00	03/16/19
19C0480-25 [TP-A2 (5-10)]	B225914	1.00	03/16/19
19C0480-26 [TP-A1 (5-10)]	B225914	1.00	03/16/19
19C0480-27 [TP-A2 (0-5)]	B225914	1.00	03/16/19

**SW-846 1030**

Lab Number [Field ID]	Batch	Initial [g]	Date
19C0480-01 [TP-C3 (0-5)]	B225718	50.0	03/14/19
19C0480-02 [TP-C3 (5-10)]	B225718	50.0	03/14/19
19C0480-03 [TP-D3 (0-5)]	B225718	50.0	03/14/19
19C0480-04 [TP-D3 (5-10)]	B225718	50.0	03/14/19
19C0480-05 [TP-D3 (10-15)]	B225718	50.0	03/14/19
19C0480-06 [TP-E3 (0-5)]	B225718	50.0	03/14/19
19C0480-07 [TP-E3 (5-10)]	B225718	50.0	03/14/19
19C0480-08 [TP-F3 (0-5)]	B225718	50.0	03/14/19
19C0480-09 [TP-F3 (5-10)]	B225718	50.0	03/14/19
19C0480-10 [TP-E2 (0-5)]	B225718	50.0	03/14/19
19C0480-11 [TP-E2 (5-10)]	B225718	50.0	03/14/19
19C0480-12 [TP-D2 (0-5)]	B225718	50.0	03/14/19

**SW-846 1030**

Lab Number [Field ID]	Batch	Initial [g]	Date
19C0480-13 [TP-D2 (5-10)]	B225932	50.0	03/17/19
19C0480-14 [TP-C2 (0-5)]	B225932	50.0	03/17/19
19C0480-15 [TP-C2 (5-10)]	B225932	50.0	03/17/19
19C0480-16 [TP-D1 (0-5)]	B225932	50.0	03/17/19
19C0480-17 [TP-D1 (5-10)]	B225932	50.0	03/17/19
19C0480-18 [TP-C1 (0-5)]	B225932	50.0	03/17/19
19C0480-19 [TP-C1 (5-10)]	B225932	50.0	03/17/19
19C0480-20 [TP-B1 (0-5)]	B225932	50.0	03/17/19
19C0480-21 [TP-B1 (5-10)]	B225932	50.0	03/17/19
19C0480-22 [TP-B2 (0-5)]	B225932	50.0	03/17/19
19C0480-23 [TP-B2 (5-10)]	B225932	50.0	03/17/19
19C0480-24 [TP-A1 (0-5)]	B225932	50.0	03/17/19
19C0480-25 [TP-A2 (5-10)]	B225932	50.0	03/17/19
19C0480-26 [TP-A1 (5-10)]	B225932	50.0	03/17/19
19C0480-27 [TP-A2 (0-5)]	B225932	50.0	03/17/19

**Sample Extraction Data**

**Prep Method: SW-846 3050B-SW-846 6010D**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C0480-01 [TP-C3 (0-5)]	B225680	1.52	50.0	03/13/19
19C0480-02 [TP-C3 (5-10)]	B225680	1.49	50.0	03/13/19
19C0480-03 [TP-D3 (0-5)]	B225680	1.53	50.0	03/13/19
19C0480-04 [TP-D3 (5-10)]	B225680	1.50	50.0	03/13/19
19C0480-05 [TP-D3 (10-15)]	B225680	1.49	50.0	03/13/19
19C0480-06 [TP-E3 (0-5)]	B225680	1.52	50.0	03/13/19
19C0480-07 [TP-E3 (5-10)]	B225680	1.50	50.0	03/13/19
19C0480-08 [TP-F3 (0-5)]	B225680	1.51	50.0	03/13/19
19C0480-09 [TP-F3 (5-10)]	B225680	1.50	50.0	03/13/19
19C0480-10 [TP-E2 (0-5)]	B225680	1.51	50.0	03/13/19
19C0480-11 [TP-E2 (5-10)]	B225680	1.52	50.0	03/13/19
19C0480-12 [TP-D2 (0-5)]	B225680	1.52	50.0	03/13/19
19C0480-13 [TP-D2 (5-10)]	B225680	1.53	50.0	03/13/19
19C0480-14 [TP-C2 (0-5)]	B225680	1.48	50.0	03/13/19
19C0480-15 [TP-C2 (5-10)]	B225680	1.53	50.0	03/13/19
19C0480-16 [TP-D1 (0-5)]	B225680	1.50	50.0	03/13/19
19C0480-17 [TP-D1 (5-10)]	B225680	1.51	50.0	03/13/19
19C0480-18 [TP-C1 (0-5)]	B225680	1.51	50.0	03/13/19
19C0480-19 [TP-C1 (5-10)]	B225680	1.49	50.0	03/13/19
19C0480-20 [TP-B1 (0-5)]	B225680	1.55	50.0	03/13/19

**Prep Method: SW-846 3050B-SW-846 6010D**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C0480-21 [TP-B1 (5-10)]	B225880	1.53	50.0	03/15/19
19C0480-22 [TP-B2 (0-5)]	B225880	1.53	50.0	03/15/19
19C0480-23 [TP-B2 (5-10)]	B225880	1.52	50.0	03/15/19
19C0480-24 [TP-A1 (0-5)]	B225880	1.55	50.0	03/15/19
19C0480-25 [TP-A2 (5-10)]	B225880	1.53	50.0	03/15/19
19C0480-26 [TP-A1 (5-10)]	B225880	1.54	50.0	03/15/19
19C0480-27 [TP-A2 (0-5)]	B225880	1.55	50.0	03/15/19

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C0480-01 [TP-C3 (0-5)]	B225636	0.627	50.0	03/13/19
19C0480-02 [TP-C3 (5-10)]	B225636	0.610	50.0	03/13/19
19C0480-03 [TP-D3 (0-5)]	B225636	0.622	50.0	03/13/19
19C0480-04 [TP-D3 (5-10)]	B225636	0.638	50.0	03/13/19
19C0480-05 [TP-D3 (10-15)]	B225636	0.636	50.0	03/13/19
19C0480-06 [TP-E3 (0-5)]	B225636	0.602	50.0	03/13/19
19C0480-07 [TP-E3 (5-10)]	B225636	0.600	50.0	03/13/19
19C0480-08 [TP-F3 (0-5)]	B225636	0.641	50.0	03/13/19
19C0480-09 [TP-F3 (5-10)]	B225636	0.625	50.0	03/13/19
19C0480-10 [TP-E2 (0-5)]	B225636	0.601	50.0	03/13/19
19C0480-11 [TP-E2 (5-10)]	B225636	0.572	50.0	03/13/19
19C0480-12 [TP-D2 (0-5)]	B225636	0.597	50.0	03/13/19

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
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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
19C0480-13 [TP-D2 (5-10)]	B225637	0.602	50.0	03/13/19
19C0480-14 [TP-C2 (0-5)]	B225637	0.635	50.0	03/13/19
19C0480-15 [TP-C2 (5-10)]	B225637	0.618	50.0	03/13/19
19C0480-16 [TP-D1 (0-5)]	B225637	0.599	50.0	03/13/19
19C0480-17 [TP-D1 (5-10)]	B225637	0.638	50.0	03/13/19
19C0480-18 [TP-C1 (0-5)]	B225637	0.630	50.0	03/13/19
19C0480-19 [TP-C1 (5-10)]	B225637	0.640	50.0	03/13/19
19C0480-20 [TP-B1 (0-5)]	B225637	0.626	50.0	03/13/19
19C0480-21 [TP-B1 (5-10)]	B225637	0.634	50.0	03/13/19
19C0480-22 [TP-B2 (0-5)]	B225637	0.607	50.0	03/13/19
19C0480-23 [TP-B2 (5-10)]	B225637	0.596	50.0	03/13/19
19C0480-24 [TP-A1 (0-5)]	B225637	0.606	50.0	03/13/19
19C0480-25 [TP-A2 (5-10)]	B225637	0.614	50.0	03/13/19
19C0480-26 [TP-A1 (5-10)]	B225637	0.601	50.0	03/13/19
19C0480-27 [TP-A2 (0-5)]	B225637	0.606	50.0	03/13/19

**Prep Method: SW-846 3540C-SW-846 8082A**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C0480-01 [TP-C3 (0-5)]	B225798	10.0	10.0	03/14/19
19C0480-02 [TP-C3 (5-10)]	B225798	10.0	10.0	03/14/19
19C0480-03 [TP-D3 (0-5)]	B225798	10.0	10.0	03/14/19
19C0480-04 [TP-D3 (5-10)]	B225798	10.0	10.0	03/14/19
19C0480-05 [TP-D3 (10-15)]	B225798	10.0	10.0	03/14/19
19C0480-06 [TP-E3 (0-5)]	B225798	10.0	10.0	03/14/19
19C0480-07 [TP-E3 (5-10)]	B225798	10.0	10.0	03/14/19
19C0480-08 [TP-F3 (0-5)]	B225798	10.1	10.0	03/14/19
19C0480-09 [TP-F3 (5-10)]	B225798	10.0	10.0	03/14/19
19C0480-10 [TP-E2 (0-5)]	B225798	10.1	10.0	03/14/19
19C0480-11 [TP-E2 (5-10)]	B225798	10.2	10.0	03/14/19
19C0480-12 [TP-D2 (0-5)]	B225798	10.0	10.0	03/14/19
19C0480-13 [TP-D2 (5-10)]	B225798	10.0	10.0	03/14/19
19C0480-14 [TP-C2 (0-5)]	B225798	10.0	10.0	03/14/19
19C0480-15 [TP-C2 (5-10)]	B225798	10.1	10.0	03/14/19
19C0480-16 [TP-D1 (0-5)]	B225798	10.0	10.0	03/14/19
19C0480-17 [TP-D1 (5-10)]	B225798	10.0	10.0	03/14/19
19C0480-18 [TP-C1 (0-5)]	B225798	10.0	10.0	03/14/19
19C0480-19 [TP-C1 (5-10)]	B225798	10.0	10.0	03/14/19
19C0480-20 [TP-B1 (0-5)]	B225798	10.0	10.0	03/14/19

**Prep Method: SW-846 3540C-SW-846 8082A**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C0480-21 [TP-B1 (5-10)]	B225799	10.0	10.0	03/14/19
19C0480-22 [TP-B2 (0-5)]	B225799	10.0	10.0	03/14/19
19C0480-23 [TP-B2 (5-10)]	B225799	10.0	10.0	03/14/19
19C0480-24 [TP-A1 (0-5)]	B225799	10.0	10.0	03/14/19
19C0480-25 [TP-A2 (5-10)]	B225799	10.0	10.0	03/14/19
19C0480-26 [TP-A1 (5-10)]	B225799	10.0	10.0	03/14/19
19C0480-27 [TP-A2 (0-5)]	B225799	10.0	10.0	03/14/19

**Sample Extraction Data**

**Prep Method: SW-846 3546-SW-846 8100 Modified**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C0480-01 [TP-C3 (0-5)]	B225812	30.0	2.00	03/15/19
19C0480-02 [TP-C3 (5-10)]	B225812	30.0	1.00	03/15/19
19C0480-03 [TP-D3 (0-5)]	B225812	30.2	2.00	03/15/19
19C0480-04 [TP-D3 (5-10)]	B225812	30.5	2.00	03/15/19
19C0480-05 [TP-D3 (10-15)]	B225812	30.3	2.00	03/15/19
19C0480-06 [TP-E3 (0-5)]	B225812	30.3	2.00	03/15/19
19C0480-07 [TP-E3 (5-10)]	B225812	30.4	2.00	03/15/19
19C0480-08 [TP-F3 (0-5)]	B225812	30.3	2.00	03/15/19
19C0480-09 [TP-F3 (5-10)]	B225812	30.3	2.00	03/15/19
19C0480-10 [TP-E2 (0-5)]	B225812	30.0	2.00	03/15/19
19C0480-11 [TP-E2 (5-10)]	B225812	30.4	2.00	03/15/19
19C0480-12 [TP-D2 (0-5)]	B225812	30.0	2.00	03/15/19
19C0480-13 [TP-D2 (5-10)]	B225812	30.2	2.00	03/15/19
19C0480-14 [TP-C2 (0-5)]	B225812	30.3	2.00	03/15/19
19C0480-15 [TP-C2 (5-10)]	B225812	30.1	2.00	03/15/19
19C0480-16 [TP-D1 (0-5)]	B225812	30.4	2.00	03/15/19
19C0480-17 [TP-D1 (5-10)]	B225812	30.2	2.00	03/15/19
19C0480-18 [TP-C1 (0-5)]	B225812	30.0	2.00	03/15/19
19C0480-19 [TP-C1 (5-10)]	B225812	30.0	2.00	03/15/19
19C0480-20 [TP-B1 (0-5)]	B225812	30.0	2.00	03/15/19

**Prep Method: SW-846 3546-SW-846 8100 Modified**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C0480-21 [TP-B1 (5-10)]	B225815	30.0	1.00	03/15/19
19C0480-22 [TP-B2 (0-5)]	B225815	30.2	1.00	03/15/19
19C0480-23 [TP-B2 (5-10)]	B225815	30.4	1.00	03/15/19
19C0480-24 [TP-A1 (0-5)]	B225815	30.0	1.00	03/15/19
19C0480-25 [TP-A2 (5-10)]	B225815	30.3	1.00	03/15/19
19C0480-26 [TP-A1 (5-10)]	B225815	30.2	1.00	03/15/19
19C0480-27 [TP-A2 (0-5)]	B225815	30.6	1.00	03/15/19

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C0480-01 [TP-C3 (0-5)]	B225666	5.10	10.0	03/13/19

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C0480-02 [TP-C3 (5-10)]	B225708	6.79	10.0	03/13/19
19C0480-03 [TP-D3 (0-5)]	B225708	5.91	10.0	03/13/19
19C0480-04 [TP-D3 (5-10)]	B225708	6.48	10.0	03/13/19
19C0480-05 [TP-D3 (10-15)]	B225708	5.28	10.0	03/13/19
19C0480-06 [TP-E3 (0-5)]	B225708	7.20	10.0	03/13/19
19C0480-07 [TP-E3 (5-10)]	B225708	5.62	10.0	03/13/19
19C0480-08 [TP-F3 (0-5)]	B225708	6.56	10.0	03/13/19
19C0480-09 [TP-F3 (5-10)]	B225708	6.34	10.0	03/13/19
19C0480-10 [TP-E2 (0-5)]	B225708	7.27	10.0	03/13/19
19C0480-11 [TP-E2 (5-10)]	B225708	6.15	10.0	03/13/19
19C0480-12 [TP-D2 (0-5)]	B225708	6.35	10.0	03/13/19

**Sample Extraction Data**

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C0480-13 [TP-D2 (5-10)]	B225708	5.64	10.0	03/13/19
19C0480-14 [TP-C2 (0-5)]	B225708	6.75	10.0	03/13/19
19C0480-15 [TP-C2 (5-10)]	B225708	7.63	10.0	03/13/19
19C0480-16 [TP-D1 (0-5)]	B225708	6.57	10.0	03/13/19
19C0480-17 [TP-D1 (5-10)]	B225708	6.49	10.0	03/13/19
19C0480-18 [TP-C1 (0-5)]	B225708	5.72	10.0	03/13/19
19C0480-19 [TP-C1 (5-10)]	B225708	6.81	10.0	03/13/19
19C0480-20 [TP-B1 (0-5)]	B225708	6.03	10.0	03/13/19

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C0480-21 [TP-B1 (5-10)]	B225764	6.40	10.0	03/14/19
19C0480-22 [TP-B2 (0-5)]	B225764	6.61	10.0	03/14/19
19C0480-23 [TP-B2 (5-10)]	B225764	6.03	10.0	03/14/19

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C0480-24 [TP-A1 (0-5)]	B225768	6.65	10.0	03/14/19
19C0480-25 [TP-A2 (5-10)]	B225768	6.41	10.0	03/14/19
19C0480-26 [TP-A1 (5-10)]	B225768	6.37	10.0	03/14/19
19C0480-27 [TP-A2 (0-5)]	B225768	6.46	10.0	03/14/19

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C0480-01 [TP-C3 (0-5)]	B225813	30.0	2.00	03/15/19
19C0480-02 [TP-C3 (5-10)]	B225813	30.0	1.00	03/15/19
19C0480-03 [TP-D3 (0-5)]	B225813	30.2	2.00	03/15/19
19C0480-04 [TP-D3 (5-10)]	B225813	30.5	2.00	03/15/19
19C0480-05 [TP-D3 (10-15)]	B225813	30.3	2.00	03/15/19
19C0480-06 [TP-E3 (0-5)]	B225813	30.3	2.00	03/15/19
19C0480-07 [TP-E3 (5-10)]	B225813	30.4	2.00	03/15/19
19C0480-08 [TP-F3 (0-5)]	B225813	30.3	2.00	03/15/19
19C0480-09 [TP-F3 (5-10)]	B225813	30.3	2.00	03/15/19
19C0480-10 [TP-E2 (0-5)]	B225813	30.0	2.00	03/15/19
19C0480-11 [TP-E2 (5-10)]	B225813	30.4	2.00	03/15/19
19C0480-12 [TP-D2 (0-5)]	B225813	30.0	2.00	03/15/19
19C0480-13 [TP-D2 (5-10)]	B225813	30.2	2.00	03/15/19
19C0480-14 [TP-C2 (0-5)]	B225813	30.3	2.00	03/15/19
19C0480-14RE1 [TP-C2 (0-5)]	B225813	30.3	2.00	03/15/19
19C0480-15 [TP-C2 (5-10)]	B225813	30.1	2.00	03/15/19
19C0480-16 [TP-D1 (0-5)]	B225813	30.4	2.00	03/15/19
19C0480-17 [TP-D1 (5-10)]	B225813	30.2	2.00	03/15/19
19C0480-18 [TP-C1 (0-5)]	B225813	30.0	2.00	03/15/19
19C0480-19 [TP-C1 (5-10)]	B225813	30.0	2.00	03/15/19
19C0480-20 [TP-B1 (0-5)]	B225813	30.0	2.00	03/15/19

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**Sample Extraction Data**

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C0480-21 [TP-B1 (5-10)]	B225814	30.0	1.00	03/15/19
19C0480-22 [TP-B2 (0-5)]	B225814	30.2	1.00	03/15/19
19C0480-23 [TP-B2 (5-10)]	B225814	30.4	1.00	03/15/19
19C0480-24 [TP-A1 (0-5)]	B225814	30.0	1.00	03/15/19
19C0480-25 [TP-A2 (5-10)]	B225814	30.3	1.00	03/15/19
19C0480-26 [TP-A1 (5-10)]	B225814	30.2	1.00	03/15/19
19C0480-27 [TP-A2 (0-5)]	B225814	30.6	1.00	03/15/19

**SW-846 9014**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C0480-01 [TP-C3 (0-5)]	B225772	25.2	250	03/14/19
19C0480-03 [TP-D3 (0-5)]	B225772	25.7	250	03/14/19
19C0480-04 [TP-D3 (5-10)]	B225772	25.1	250	03/14/19
19C0480-05 [TP-D3 (10-15)]	B225772	25.5	250	03/14/19
19C0480-06 [TP-E3 (0-5)]	B225772	25.5	250	03/14/19
19C0480-07 [TP-E3 (5-10)]	B225772	25.2	250	03/14/19
19C0480-08 [TP-F3 (0-5)]	B225772	25.5	250	03/14/19
19C0480-09 [TP-F3 (5-10)]	B225772	25.3	250	03/14/19
19C0480-10 [TP-E2 (0-5)]	B225772	25.4	250	03/14/19

**SW-846 9014**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C0480-14 [TP-C2 (0-5)]	B225873	25.6	250	03/15/19
19C0480-15 [TP-C2 (5-10)]	B225873	25.5	250	03/15/19
19C0480-16 [TP-D1 (0-5)]	B225873	25.4	250	03/15/19
19C0480-17 [TP-D1 (5-10)]	B225873	25.1	250	03/15/19
19C0480-18 [TP-C1 (0-5)]	B225873	25.4	250	03/15/19
19C0480-19 [TP-C1 (5-10)]	B225873	25.4	250	03/15/19
19C0480-20 [TP-B1 (0-5)]	B225873	25.8	250	03/15/19
19C0480-21 [TP-B1 (5-10)]	B225873	25.0	250	03/15/19
19C0480-22 [TP-B2 (0-5)]	B225873	25.5	250	03/15/19
19C0480-23 [TP-B2 (5-10)]	B225873	25.2	250	03/15/19
19C0480-24 [TP-A1 (0-5)]	B225873	25.5	250	03/15/19
19C0480-25 [TP-A2 (5-10)]	B225873	25.5	250	03/15/19
19C0480-26 [TP-A1 (5-10)]	B225873	25.8	250	03/15/19
19C0480-27 [TP-A2 (0-5)]	B225873	25.4	250	03/15/19

**SW-846 9014**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C0480-02 [TP-C3 (5-10)]	B225897	25.7	250	03/16/19
19C0480-11 [TP-E2 (5-10)]	B225897	25.5	250	03/16/19
19C0480-12 [TP-D2 (0-5)]	B225897	25.2	250	03/16/19
19C0480-13 [TP-D2 (5-10)]	B225897	25.8	250	03/16/19

**SW-846 9030A**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
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**Sample Extraction Data**

**SW-846 9030A**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C0480-01 [TP-C3 (0-5)]	B225773	25.2	250	03/14/19
19C0480-03 [TP-D3 (0-5)]	B225773	25.7	250	03/14/19
19C0480-04 [TP-D3 (5-10)]	B225773	25.1	250	03/14/19
19C0480-05 [TP-D3 (10-15)]	B225773	25.5	250	03/14/19
19C0480-06 [TP-E3 (0-5)]	B225773	25.5	250	03/14/19
19C0480-07 [TP-E3 (5-10)]	B225773	25.2	250	03/14/19
19C0480-08 [TP-F3 (0-5)]	B225773	25.5	250	03/14/19
19C0480-09 [TP-F3 (5-10)]	B225773	25.3	250	03/14/19
19C0480-10 [TP-E2 (0-5)]	B225773	25.4	250	03/14/19

**SW-846 9030A**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C0480-14 [TP-C2 (0-5)]	B225875	25.6	250	03/15/19
19C0480-15 [TP-C2 (5-10)]	B225875	25.5	250	03/15/19
19C0480-16 [TP-D1 (0-5)]	B225875	25.4	250	03/15/19
19C0480-17 [TP-D1 (5-10)]	B225875	25.1	250	03/15/19
19C0480-18 [TP-C1 (0-5)]	B225875	25.4	250	03/15/19
19C0480-19 [TP-C1 (5-10)]	B225875	25.4	250	03/15/19
19C0480-20 [TP-B1 (0-5)]	B225875	25.8	250	03/15/19
19C0480-21 [TP-B1 (5-10)]	B225875	25.0	250	03/15/19
19C0480-22 [TP-B2 (0-5)]	B225875	25.5	250	03/15/19
19C0480-23 [TP-B2 (5-10)]	B225875	25.2	250	03/15/19
19C0480-24 [TP-A1 (0-5)]	B225875	25.5	250	03/15/19
19C0480-25 [TP-A2 (5-10)]	B225875	25.5	250	03/15/19
19C0480-26 [TP-A1 (5-10)]	B225875	25.8	250	03/15/19
19C0480-27 [TP-A2 (0-5)]	B225875	25.4	250	03/15/19

**SW-846 9030A**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C0480-02 [TP-C3 (5-10)]	B225899	25.7	250	03/16/19
19C0480-11 [TP-E2 (5-10)]	B225899	25.5	250	03/16/19
19C0480-12 [TP-D2 (0-5)]	B225899	25.2	250	03/16/19
19C0480-13 [TP-D2 (5-10)]	B225899	25.8	250	03/16/19

**SW-846 9045C**

Lab Number [Field ID]	Batch	Initial [g]	Date
19C0480-04 [TP-D3 (5-10)]	B225572	20.0	03/12/19
19C0480-05 [TP-D3 (10-15)]	B225572	20.0	03/12/19
19C0480-06 [TP-E3 (0-5)]	B225572	20.0	03/12/19
19C0480-07 [TP-E3 (5-10)]	B225572	20.0	03/12/19
19C0480-08 [TP-F3 (0-5)]	B225572	20.0	03/12/19
19C0480-09 [TP-F3 (5-10)]	B225572	20.0	03/12/19
19C0480-10 [TP-E2 (0-5)]	B225572	20.0	03/12/19
19C0480-14 [TP-C2 (0-5)]	B225572	20.0	03/12/19
19C0480-15 [TP-C2 (5-10)]	B225572	20.0	03/12/19
19C0480-16 [TP-D1 (0-5)]	B225572	20.0	03/12/19
19C0480-17 [TP-D1 (5-10)]	B225572	20.0	03/12/19
19C0480-18 [TP-C1 (0-5)]	B225572	20.0	03/12/19

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**Sample Extraction Data****SW-846 9045C**

<b>Lab Number [Field ID]</b>	<b>Batch</b>	<b>Initial [g]</b>	<b>Date</b>
19C0480-19 [TP-C1 (5-10)]	B225572	20.0	03/12/19
19C0480-20 [TP-B1 (0-5)]	B225572	20.0	03/12/19
19C0480-21 [TP-B1 (5-10)]	B225572	20.0	03/12/19
19C0480-22 [TP-B2 (0-5)]	B225572	20.0	03/12/19
19C0480-23 [TP-B2 (5-10)]	B225572	20.0	03/12/19
19C0480-24 [TP-A1 (0-5)]	B225572	20.0	03/12/19
19C0480-25 [TP-A2 (5-10)]	B225572	20.0	03/12/19
19C0480-26 [TP-A1 (5-10)]	B225572	20.0	03/12/19

**SW-846 9045C**

<b>Lab Number [Field ID]</b>	<b>Batch</b>	<b>Initial [g]</b>	<b>Date</b>
19C0480-01 [TP-C3 (0-5)]	B225573	20.0	03/12/19
19C0480-02 [TP-C3 (5-10)]	B225573	20.0	03/12/19
19C0480-03 [TP-D3 (0-5)]	B225573	20.0	03/12/19
19C0480-11 [TP-E2 (5-10)]	B225573	20.0	03/12/19
19C0480-12 [TP-D2 (0-5)]	B225573	20.0	03/12/19
19C0480-13 [TP-D2 (5-10)]	B225573	20.0	03/12/19
19C0480-27 [TP-A2 (0-5)]	B225573	20.0	03/12/19

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 B225666 - SW-846 5035

Blank (B225666-BLK1)

Prepared & Analyzed: 03/13/19

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							
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							V-05
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							
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 B225666 - SW-846 5035

Blank (B225666-BLK1)

Prepared & Analyzed: 03/13/19

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	0.0427		mg/Kg wet	0.0500		85.4	70-130			
Surrogate: Toluene-d8	0.0485		mg/Kg wet	0.0500		97.0	70-130			
Surrogate: 4-Bromofluorobenzene	0.0507		mg/Kg wet	0.0500		101	70-130			

LCS (B225666-BS1)

Prepared & Analyzed: 03/13/19

Acetone	0.239	0.10	mg/Kg wet	0.200		120	40-160			†
tert-Amyl Methyl Ether (TAME)	0.0181	0.0010	mg/Kg wet	0.0200		90.3	70-130			
Benzene	0.0172	0.0020	mg/Kg wet	0.0200		85.8	70-130			
Bromobenzene	0.0189	0.0020	mg/Kg wet	0.0200		94.5	70-130			
Bromochloromethane	0.0190	0.0020	mg/Kg wet	0.0200		95.2	70-130			
Bromodichloromethane	0.0199	0.0020	mg/Kg wet	0.0200		99.4	70-130			
Bromoform	0.0214	0.0020	mg/Kg wet	0.0200		107	70-130			
Bromomethane	0.0166	0.010	mg/Kg wet	0.0200		83.0	40-160	V-34		†
2-Butanone (MEK)	0.176	0.040	mg/Kg wet	0.200		88.2	40-160			†
n-Butylbenzene	0.0179	0.0020	mg/Kg wet	0.0200		89.3	70-130			
sec-Butylbenzene	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130			
tert-Butylbenzene	0.0189	0.0020	mg/Kg wet	0.0200		94.4	70-130			
tert-Butyl Ethyl Ether (TBEE)	0.0175	0.0010	mg/Kg wet	0.0200		87.7	70-130			
Carbon Disulfide	0.0251	0.0060	mg/Kg wet	0.0200		125	70-130			
Carbon Tetrachloride	0.0189	0.0020	mg/Kg wet	0.0200		94.6	70-130			
Chlorobenzene	0.0201	0.0020	mg/Kg wet	0.0200		100	70-130			
Chlorodibromomethane	0.0225	0.0010	mg/Kg wet	0.0200		113	70-130			
Chloroethane	0.0206	0.010	mg/Kg wet	0.0200		103	70-130			
Chloroform	0.0174	0.0040	mg/Kg wet	0.0200		87.1	70-130			
Chloromethane	0.0183	0.010	mg/Kg wet	0.0200		91.5	40-160			†
2-Chlorotoluene	0.0187	0.0020	mg/Kg wet	0.0200		93.6	70-130			
4-Chlorotoluene	0.0196	0.0020	mg/Kg wet	0.0200		97.8	70-130			
1,2-Dibromo-3-chloropropane (DBCP)	0.0158	0.0020	mg/Kg wet	0.0200		78.9	70-130			V-05
1,2-Dibromoethane (EDB)	0.0207	0.0010	mg/Kg wet	0.0200		104	70-130			
Dibromomethane	0.0200	0.0020	mg/Kg wet	0.0200		99.9	70-130			
1,2-Dichlorobenzene	0.0188	0.0020	mg/Kg wet	0.0200		93.9	70-130			
1,3-Dichlorobenzene	0.0194	0.0020	mg/Kg wet	0.0200		97.1	70-130			
1,4-Dichlorobenzene	0.0185	0.0020	mg/Kg wet	0.0200		92.5	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
<b>Batch B225666 - SW-846 5035</b>										
<b>LCS (B225666-BS1)</b>										
Prepared & Analyzed: 03/13/19										
Dichlorodifluoromethane (Freon 12)	0.0146	0.010	mg/Kg wet	0.0200		72.9	40-160			†
1,1-Dichloroethane	0.0181	0.0020	mg/Kg wet	0.0200		90.3	70-130			
1,2-Dichloroethane	0.0191	0.0020	mg/Kg wet	0.0200		95.7	70-130			
1,1-Dichloroethylene	0.0223	0.0040	mg/Kg wet	0.0200		112	70-130			
cis-1,2-Dichloroethylene	0.0185	0.0020	mg/Kg wet	0.0200		92.5	70-130			
trans-1,2-Dichloroethylene	0.0185	0.0020	mg/Kg wet	0.0200		92.4	70-130			
1,2-Dichloropropane	0.0191	0.0020	mg/Kg wet	0.0200		95.7	70-130			
1,3-Dichloropropane	0.0196	0.0010	mg/Kg wet	0.0200		98.2	70-130			
2,2-Dichloropropane	0.0168	0.0020	mg/Kg wet	0.0200		84.1	70-130			
1,1-Dichloropropene	0.0170	0.0020	mg/Kg wet	0.0200		84.8	70-130			
cis-1,3-Dichloropropene	0.0199	0.0010	mg/Kg wet	0.0200		99.4	70-130			
trans-1,3-Dichloropropene	0.0186	0.0010	mg/Kg wet	0.0200		92.9	70-130			
Diethyl Ether	0.0208	0.010	mg/Kg wet	0.0200		104	70-130			
Diisopropyl Ether (DIPE)	0.0183	0.0010	mg/Kg wet	0.0200		91.5	70-130			
1,4-Dioxane	0.166	0.10	mg/Kg wet	0.200		82.8	40-160		V-16	†
Ethylbenzene	0.0188	0.0020	mg/Kg wet	0.0200		94.0	70-130			
Hexachlorobutadiene	0.0206	0.0020	mg/Kg wet	0.0200		103	70-130			
2-Hexanone (MBK)	0.194	0.020	mg/Kg wet	0.200		97.1	40-160			†
Isopropylbenzene (Cumene)	0.0214	0.0020	mg/Kg wet	0.0200		107	70-130			
p-Isopropyltoluene (p-Cymene)	0.0188	0.0020	mg/Kg wet	0.0200		94.0	70-130			
Methyl tert-Butyl Ether (MTBE)	0.0176	0.0040	mg/Kg wet	0.0200		87.9	70-130			
Methylene Chloride	0.0184	0.010	mg/Kg wet	0.0200		92.1	70-130			
4-Methyl-2-pentanone (MIBK)	0.198	0.020	mg/Kg wet	0.200		98.9	40-160			†
Naphthalene	0.0171	0.0040	mg/Kg wet	0.0200		85.3	70-130			
n-Propylbenzene	0.0203	0.0020	mg/Kg wet	0.0200		102	70-130			
Styrene	0.0199	0.0020	mg/Kg wet	0.0200		99.6	70-130			
1,1,1,2-Tetrachloroethane	0.0201	0.0020	mg/Kg wet	0.0200		100	70-130			
1,1,1,2,2-Tetrachloroethane	0.0179	0.0010	mg/Kg wet	0.0200		89.4	70-130			
Tetrachloroethylene	0.0228	0.0020	mg/Kg wet	0.0200		114	70-130			
Tetrahydrofuran	0.0179	0.010	mg/Kg wet	0.0200		89.5	70-130			
Toluene	0.0194	0.0020	mg/Kg wet	0.0200		96.8	70-130			
1,2,3-Trichlorobenzene	0.0178	0.0020	mg/Kg wet	0.0200		88.8	70-130			
1,2,4-Trichlorobenzene	0.0179	0.0020	mg/Kg wet	0.0200		89.5	70-130			
1,1,1-Trichloroethane	0.0172	0.0020	mg/Kg wet	0.0200		85.9	70-130			
1,1,2-Trichloroethane	0.0191	0.0020	mg/Kg wet	0.0200		95.4	70-130			
Trichloroethylene	0.0191	0.0020	mg/Kg wet	0.0200		95.7	70-130			
Trichlorofluoromethane (Freon 11)	0.0189	0.010	mg/Kg wet	0.0200		94.7	70-130			
1,2,3-Trichloropropane	0.0193	0.0020	mg/Kg wet	0.0200		96.4	70-130			
1,2,4-Trimethylbenzene	0.0172	0.0020	mg/Kg wet	0.0200		85.9	70-130			
1,3,5-Trimethylbenzene	0.0191	0.0020	mg/Kg wet	0.0200		95.6	70-130			
Vinyl Chloride	0.0189	0.010	mg/Kg wet	0.0200		94.3	70-130			
m+p Xylene	0.0373	0.0040	mg/Kg wet	0.0400		93.4	70-130			
o-Xylene	0.0194	0.0020	mg/Kg wet	0.0200		97.2	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0426		mg/Kg wet	0.0500		85.2	70-130			
Surrogate: Toluene-d8	0.0491		mg/Kg wet	0.0500		98.1	70-130			
Surrogate: 4-Bromofluorobenzene	0.0516		mg/Kg wet	0.0500		103	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
<b>Batch B225666 - SW-846 5035</b>										
<b>LCS Dup (B225666-BSD1)</b>										
Prepared & Analyzed: 03/13/19										
Acetone	0.230	0.10	mg/Kg wet	0.200		115	40-160	3.95	20	†
tert-Amyl Methyl Ether (TAME)	0.0177	0.0010	mg/Kg wet	0.0200		88.6	70-130	1.90	20	
Benzene	0.0172	0.0020	mg/Kg wet	0.0200		86.0	70-130	0.233	20	
Bromobenzene	0.0186	0.0020	mg/Kg wet	0.0200		93.1	70-130	1.49	20	
Bromochloromethane	0.0185	0.0020	mg/Kg wet	0.0200		92.6	70-130	2.77	20	
Bromodichloromethane	0.0191	0.0020	mg/Kg wet	0.0200		95.6	70-130	3.90	20	
Bromoform	0.0187	0.0020	mg/Kg wet	0.0200		93.3	70-130	13.5	20	
Bromomethane	0.0164	0.010	mg/Kg wet	0.0200		82.2	40-160	0.969	20	V-34 †
2-Butanone (MEK)	0.177	0.040	mg/Kg wet	0.200		88.3	40-160	0.0793	20	†
n-Butylbenzene	0.0176	0.0020	mg/Kg wet	0.0200		88.2	70-130	1.24	20	
sec-Butylbenzene	0.0195	0.0020	mg/Kg wet	0.0200		97.6	70-130	3.42	20	
tert-Butylbenzene	0.0190	0.0020	mg/Kg wet	0.0200		94.8	70-130	0.423	20	
tert-Butyl Ethyl Ether (TBEE)	0.0168	0.0010	mg/Kg wet	0.0200		84.2	70-130	4.07	20	
Carbon Disulfide	0.0251	0.0060	mg/Kg wet	0.0200		125	70-130	0.0798	20	
Carbon Tetrachloride	0.0188	0.0020	mg/Kg wet	0.0200		93.9	70-130	0.743	20	
Chlorobenzene	0.0201	0.0020	mg/Kg wet	0.0200		100	70-130	0.0997	20	
Chlorodibromomethane	0.0200	0.0010	mg/Kg wet	0.0200		100	70-130	11.9	20	
Chloroethane	0.0192	0.010	mg/Kg wet	0.0200		96.2	70-130	6.83	20	
Chloroform	0.0178	0.0040	mg/Kg wet	0.0200		88.9	70-130	2.05	20	
Chloromethane	0.0177	0.010	mg/Kg wet	0.0200		88.4	40-160	3.45	20	†
2-Chlorotoluene	0.0184	0.0020	mg/Kg wet	0.0200		91.8	70-130	1.94	20	
4-Chlorotoluene	0.0193	0.0020	mg/Kg wet	0.0200		96.7	70-130	1.13	20	
1,2-Dibromo-3-chloropropane (DBCP)	0.0150	0.0020	mg/Kg wet	0.0200		75.2	70-130	4.80	20	V-05
1,2-Dibromoethane (EDB)	0.0197	0.0010	mg/Kg wet	0.0200		98.5	70-130	5.14	20	
Dibromomethane	0.0195	0.0020	mg/Kg wet	0.0200		97.3	70-130	2.64	20	
1,2-Dichlorobenzene	0.0193	0.0020	mg/Kg wet	0.0200		96.4	70-130	2.63	20	
1,3-Dichlorobenzene	0.0194	0.0020	mg/Kg wet	0.0200		96.9	70-130	0.206	20	
1,4-Dichlorobenzene	0.0179	0.0020	mg/Kg wet	0.0200		89.6	70-130	3.19	20	
Dichlorodifluoromethane (Freon 12)	0.0140	0.010	mg/Kg wet	0.0200		70.1	40-160	3.92	20	†
1,1-Dichloroethane	0.0179	0.0020	mg/Kg wet	0.0200		89.6	70-130	0.778	20	
1,2-Dichloroethane	0.0184	0.0020	mg/Kg wet	0.0200		91.8	70-130	4.16	20	
1,1-Dichloroethylene	0.0213	0.0040	mg/Kg wet	0.0200		106	70-130	4.77	20	
cis-1,2-Dichloroethylene	0.0184	0.0020	mg/Kg wet	0.0200		92.0	70-130	0.542	20	
trans-1,2-Dichloroethylene	0.0182	0.0020	mg/Kg wet	0.0200		91.0	70-130	1.53	20	
1,2-Dichloropropane	0.0181	0.0020	mg/Kg wet	0.0200		90.3	70-130	5.81	20	
1,3-Dichloropropane	0.0186	0.0010	mg/Kg wet	0.0200		93.1	70-130	5.33	20	
2,2-Dichloropropane	0.0161	0.0020	mg/Kg wet	0.0200		80.3	70-130	4.62	20	
1,1-Dichloropropene	0.0168	0.0020	mg/Kg wet	0.0200		84.2	70-130	0.710	20	
cis-1,3-Dichloropropene	0.0189	0.0010	mg/Kg wet	0.0200		94.5	70-130	5.05	20	
trans-1,3-Dichloropropene	0.0176	0.0010	mg/Kg wet	0.0200		87.8	70-130	5.64	20	
Diethyl Ether	0.0214	0.010	mg/Kg wet	0.0200		107	70-130	2.74	20	
Diisopropyl Ether (DIPE)	0.0178	0.0010	mg/Kg wet	0.0200		88.8	70-130	3.00	20	
1,4-Dioxane	0.159	0.10	mg/Kg wet	0.200		79.5	40-160	4.02	20	V-16 †
Ethylbenzene	0.0189	0.0020	mg/Kg wet	0.0200		94.5	70-130	0.531	20	
Hexachlorobutadiene	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130	1.96	20	
2-Hexanone (MBK)	0.191	0.020	mg/Kg wet	0.200		95.6	40-160	1.55	20	†
Isopropylbenzene (Cumene)	0.0208	0.0020	mg/Kg wet	0.0200		104	70-130	2.46	20	
p-Isopropyltoluene (p-Cymene)	0.0179	0.0020	mg/Kg wet	0.0200		89.6	70-130	4.79	20	
Methyl tert-Butyl Ether (MTBE)	0.0177	0.0040	mg/Kg wet	0.0200		88.5	70-130	0.680	20	
Methylene Chloride	0.0180	0.010	mg/Kg wet	0.0200		90.0	70-130	2.31	20	
4-Methyl-2-pentanone (MIBK)	0.196	0.020	mg/Kg wet	0.200		97.9	40-160	0.955	20	†
Naphthalene	0.0169	0.0040	mg/Kg wet	0.0200		84.5	70-130	0.942	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
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**Batch B225666 - SW-846 5035**

**LCS Dup (B225666-BSD1)**

Prepared & Analyzed: 03/13/19

n-Propylbenzene	0.0196	0.0020	mg/Kg wet	0.0200		97.8	70-130	3.81	20	
Styrene	0.0200	0.0020	mg/Kg wet	0.0200		99.8	70-130	0.201	20	
1,1,1,2-Tetrachloroethane	0.0187	0.0020	mg/Kg wet	0.0200		93.5	70-130	7.12	20	
1,1,2,2-Tetrachloroethane	0.0183	0.0010	mg/Kg wet	0.0200		91.5	70-130	2.32	20	
Tetrachloroethylene	0.0220	0.0020	mg/Kg wet	0.0200		110	70-130	3.57	20	
Tetrahydrofuran	0.0197	0.010	mg/Kg wet	0.0200		98.5	70-130	9.57	20	
Toluene	0.0186	0.0020	mg/Kg wet	0.0200		93.1	70-130	3.90	20	
1,2,3-Trichlorobenzene	0.0175	0.0020	mg/Kg wet	0.0200		87.3	70-130	1.70	20	
1,2,4-Trichlorobenzene	0.0179	0.0020	mg/Kg wet	0.0200		89.6	70-130	0.112	20	
1,1,1-Trichloroethane	0.0175	0.0020	mg/Kg wet	0.0200		87.5	70-130	1.85	20	
1,1,2-Trichloroethane	0.0179	0.0020	mg/Kg wet	0.0200		89.7	70-130	6.16	20	
Trichloroethylene	0.0185	0.0020	mg/Kg wet	0.0200		92.7	70-130	3.18	20	
Trichlorofluoromethane (Freon 11)	0.0197	0.010	mg/Kg wet	0.0200		98.5	70-130	3.93	20	
1,2,3-Trichloropropane	0.0192	0.0020	mg/Kg wet	0.0200		95.8	70-130	0.624	20	
1,2,4-Trimethylbenzene	0.0169	0.0020	mg/Kg wet	0.0200		84.6	70-130	1.52	20	
1,3,5-Trimethylbenzene	0.0191	0.0020	mg/Kg wet	0.0200		95.3	70-130	0.314	20	
Vinyl Chloride	0.0184	0.010	mg/Kg wet	0.0200		91.8	70-130	2.69	20	
m+p Xylene	0.0363	0.0040	mg/Kg wet	0.0400		90.7	70-130	2.93	20	
o-Xylene	0.0185	0.0020	mg/Kg wet	0.0200		92.7	70-130	4.74	20	
Surrogate: 1,2-Dichloroethane-d4	0.0425		mg/Kg wet	0.0500		84.9	70-130			
Surrogate: Toluene-d8	0.0490		mg/Kg wet	0.0500		98.0	70-130			
Surrogate: 4-Bromofluorobenzene	0.0515		mg/Kg wet	0.0500		103	70-130			

**Batch B225708 - SW-846 5035**

**Blank (B225708-BLK1)**

Prepared & Analyzed: 03/14/19

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							
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							

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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
<b>Batch B225708 - SW-846 5035</b>										
<b>Blank (B225708-BLK1)</b>										
Prepared & Analyzed: 03/14/19										
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							
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							
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							
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							L-04
m+p Xylene	ND	0.0040	mg/Kg wet							
o-Xylene	ND	0.0020	mg/Kg wet							
Surrogate: 1,2-Dichloroethane-d4	0.0503		mg/Kg wet	0.0500		101	70-130			
Surrogate: Toluene-d8	0.0461		mg/Kg wet	0.0500		92.1	70-130			
Surrogate: 4-Bromofluorobenzene	0.0494		mg/Kg wet	0.0500		98.9	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
<b>Batch B225708 - SW-846 5035</b>										
<b>LCS (B225708-BS1)</b>										
Prepared & Analyzed: 03/14/19										
Acetone	0.233	0.10	mg/Kg wet	0.200		116	40-160			†
tert-Amyl Methyl Ether (TAME)	0.0184	0.0010	mg/Kg wet	0.0200		92.0	70-130			
Benzene	0.0168	0.0020	mg/Kg wet	0.0200		84.2	70-130			
Bromobenzene	0.0219	0.0020	mg/Kg wet	0.0200		110	70-130			
Bromochloromethane	0.0175	0.0020	mg/Kg wet	0.0200		87.7	70-130			
Bromodichloromethane	0.0194	0.0020	mg/Kg wet	0.0200		97.0	70-130			
Bromoform	0.0238	0.0020	mg/Kg wet	0.0200		119	70-130			V-20
Bromomethane	0.0103	0.010	mg/Kg wet	0.0200		51.3	40-160			L-14, V-34 †
2-Butanone (MEK)	0.210	0.040	mg/Kg wet	0.200		105	40-160			†
n-Butylbenzene	0.0229	0.0020	mg/Kg wet	0.0200		114	70-130			
sec-Butylbenzene	0.0231	0.0020	mg/Kg wet	0.0200		116	70-130			
tert-Butylbenzene	0.0228	0.0020	mg/Kg wet	0.0200		114	70-130			
tert-Butyl Ethyl Ether (TBEE)	0.0178	0.0010	mg/Kg wet	0.0200		89.2	70-130			
Carbon Disulfide	0.0183	0.0060	mg/Kg wet	0.0200		91.4	70-130			
Carbon Tetrachloride	0.0188	0.0020	mg/Kg wet	0.0200		93.9	70-130			
Chlorobenzene	0.0218	0.0020	mg/Kg wet	0.0200		109	70-130			
Chlorodibromomethane	0.0207	0.0010	mg/Kg wet	0.0200		104	70-130			
Chloroethane	0.0175	0.010	mg/Kg wet	0.0200		87.7	70-130			
Chloroform	0.0176	0.0040	mg/Kg wet	0.0200		87.9	70-130			
Chloromethane	0.0120	0.010	mg/Kg wet	0.0200		60.2	40-160			†
2-Chlorotoluene	0.0224	0.0020	mg/Kg wet	0.0200		112	70-130			
4-Chlorotoluene	0.0221	0.0020	mg/Kg wet	0.0200		111	70-130			
1,2-Dibromo-3-chloropropane (DBCP)	0.0223	0.0020	mg/Kg wet	0.0200		112	70-130			
1,2-Dibromoethane (EDB)	0.0200	0.0010	mg/Kg wet	0.0200		99.9	70-130			
Dibromomethane	0.0183	0.0020	mg/Kg wet	0.0200		91.3	70-130			
1,2-Dichlorobenzene	0.0223	0.0020	mg/Kg wet	0.0200		112	70-130			
1,3-Dichlorobenzene	0.0231	0.0020	mg/Kg wet	0.0200		116	70-130			
1,4-Dichlorobenzene	0.0218	0.0020	mg/Kg wet	0.0200		109	70-130			
Dichlorodifluoromethane (Freon 12)	0.0125	0.010	mg/Kg wet	0.0200		62.6	40-160			L-14 †
1,1-Dichloroethane	0.0174	0.0020	mg/Kg wet	0.0200		86.8	70-130			
1,2-Dichloroethane	0.0187	0.0020	mg/Kg wet	0.0200		93.7	70-130			
1,1-Dichloroethylene	0.0175	0.0040	mg/Kg wet	0.0200		87.3	70-130			
cis-1,2-Dichloroethylene	0.0173	0.0020	mg/Kg wet	0.0200		86.3	70-130			
trans-1,2-Dichloroethylene	0.0174	0.0020	mg/Kg wet	0.0200		87.0	70-130			
1,2-Dichloropropane	0.0187	0.0020	mg/Kg wet	0.0200		93.7	70-130			
1,3-Dichloropropane	0.0179	0.0010	mg/Kg wet	0.0200		89.4	70-130			
2,2-Dichloropropane	0.0185	0.0020	mg/Kg wet	0.0200		92.3	70-130			
1,1-Dichloropropene	0.0172	0.0020	mg/Kg wet	0.0200		86.2	70-130			
cis-1,3-Dichloropropene	0.0186	0.0010	mg/Kg wet	0.0200		93.2	70-130			
trans-1,3-Dichloropropene	0.0195	0.0010	mg/Kg wet	0.0200		97.7	70-130			
Diethyl Ether	0.0161	0.010	mg/Kg wet	0.0200		80.7	70-130			
Diisopropyl Ether (DIPE)	0.0176	0.0010	mg/Kg wet	0.0200		87.9	70-130			
1,4-Dioxane	0.204	0.10	mg/Kg wet	0.200		102	40-160			†
Ethylbenzene	0.0213	0.0020	mg/Kg wet	0.0200		107	70-130			
Hexachlorobutadiene	0.0241	0.0020	mg/Kg wet	0.0200		121	70-130			
2-Hexanone (MBK)	0.202	0.020	mg/Kg wet	0.200		101	40-160			†
Isopropylbenzene (Cumene)	0.0229	0.0020	mg/Kg wet	0.0200		114	70-130			
p-Isopropyltoluene (p-Cymene)	0.0229	0.0020	mg/Kg wet	0.0200		114	70-130			
Methyl tert-Butyl Ether (MTBE)	0.0179	0.0040	mg/Kg wet	0.0200		89.3	70-130			
Methylene Chloride	0.0182	0.010	mg/Kg wet	0.0200		91.0	70-130			
4-Methyl-2-pentanone (MIBK)	0.194	0.020	mg/Kg wet	0.200		97.1	40-160			†
Naphthalene	0.0210	0.0040	mg/Kg wet	0.0200		105	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
<b>Batch B225708 - SW-846 5035</b>										
<b>LCS (B225708-BS1)</b>										
Prepared & Analyzed: 03/14/19										
n-Propylbenzene	0.0220	0.0020	mg/Kg wet	0.0200		110	70-130			
Styrene	0.0217	0.0020	mg/Kg wet	0.0200		108	70-130			
1,1,1,2-Tetrachloroethane	0.0219	0.0020	mg/Kg wet	0.0200		110	70-130			
1,1,2,2-Tetrachloroethane	0.0225	0.0010	mg/Kg wet	0.0200		112	70-130			
Tetrachloroethylene	0.0199	0.0020	mg/Kg wet	0.0200		99.3	70-130			
Tetrahydrofuran	0.0171	0.010	mg/Kg wet	0.0200		85.7	70-130			
Toluene	0.0186	0.0020	mg/Kg wet	0.0200		93.0	70-130			
1,2,3-Trichlorobenzene	0.0225	0.0020	mg/Kg wet	0.0200		113	70-130			
1,2,4-Trichlorobenzene	0.0224	0.0020	mg/Kg wet	0.0200		112	70-130			
1,1,1-Trichloroethane	0.0185	0.0020	mg/Kg wet	0.0200		92.7	70-130			
1,1,2-Trichloroethane	0.0192	0.0020	mg/Kg wet	0.0200		95.8	70-130			
Trichloroethylene	0.0184	0.0020	mg/Kg wet	0.0200		92.2	70-130			
Trichlorofluoromethane (Freon 11)	0.0156	0.010	mg/Kg wet	0.0200		78.0	70-130			
1,2,3-Trichloropropane	0.0194	0.0020	mg/Kg wet	0.0200		97.0	70-130			
1,2,4-Trimethylbenzene	0.0217	0.0020	mg/Kg wet	0.0200		108	70-130			
1,3,5-Trimethylbenzene	0.0223	0.0020	mg/Kg wet	0.0200		111	70-130			
<b>Vinyl Chloride</b>	0.0135	0.010	mg/Kg wet	0.0200		<b>67.4</b> *	70-130			L-04
m+p Xylene	0.0438	0.0040	mg/Kg wet	0.0400		109	70-130			
o-Xylene	0.0218	0.0020	mg/Kg wet	0.0200		109	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0488		mg/Kg wet	0.0500		97.7	70-130			
Surrogate: Toluene-d8	0.0473		mg/Kg wet	0.0500		94.6	70-130			
Surrogate: 4-Bromofluorobenzene	0.0490		mg/Kg wet	0.0500		98.1	70-130			
<b>LCS Dup (B225708-BS1)</b>										
Prepared & Analyzed: 03/14/19										
Acetone	0.209	0.10	mg/Kg wet	0.200		105	40-160	10.8	20	†
tert-Amyl Methyl Ether (TAME)	0.0184	0.0010	mg/Kg wet	0.0200		91.9	70-130	0.0652	20	
Benzene	0.0168	0.0020	mg/Kg wet	0.0200		84.0	70-130	0.333	20	
Bromobenzene	0.0220	0.0020	mg/Kg wet	0.0200		110	70-130	0.465	20	
Bromochloromethane	0.0179	0.0020	mg/Kg wet	0.0200		89.6	70-130	2.19	20	
Bromodichloromethane	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130	4.20	20	
Bromoform	0.0245	0.0020	mg/Kg wet	0.0200		122	70-130	2.73	20	V-20
Bromomethane	0.0110	0.010	mg/Kg wet	0.0200		54.9	40-160	6.82	20	L-14, V-34 †
2-Butanone (MEK)	0.210	0.040	mg/Kg wet	0.200		105	40-160	0.402	20	†
n-Butylbenzene	0.0230	0.0020	mg/Kg wet	0.0200		115	70-130	0.471	20	
sec-Butylbenzene	0.0231	0.0020	mg/Kg wet	0.0200		116	70-130	0.0778	20	
tert-Butylbenzene	0.0228	0.0020	mg/Kg wet	0.0200		114	70-130	0.289	20	
tert-Butyl Ethyl Ether (TBEE)	0.0176	0.0010	mg/Kg wet	0.0200		88.1	70-130	1.18	20	
Carbon Disulfide	0.0183	0.0060	mg/Kg wet	0.0200		91.3	70-130	0.142	20	
Carbon Tetrachloride	0.0190	0.0020	mg/Kg wet	0.0200		95.0	70-130	1.16	20	
Chlorobenzene	0.0222	0.0020	mg/Kg wet	0.0200		111	70-130	1.54	20	
Chlorodibromomethane	0.0211	0.0010	mg/Kg wet	0.0200		106	70-130	1.92	20	
Chloroethane	0.0173	0.010	mg/Kg wet	0.0200		86.3	70-130	1.54	20	
Chloroform	0.0176	0.0040	mg/Kg wet	0.0200		87.9	70-130	0.0683	20	
Chloromethane	0.0121	0.010	mg/Kg wet	0.0200		60.6	40-160	0.762	20	†
2-Chlorotoluene	0.0226	0.0020	mg/Kg wet	0.0200		113	70-130	0.498	20	
4-Chlorotoluene	0.0225	0.0020	mg/Kg wet	0.0200		112	70-130	1.48	20	
1,2-Dibromo-3-chloropropane (DBCP)	0.0238	0.0020	mg/Kg wet	0.0200		119	70-130	6.47	20	
1,2-Dibromoethane (EDB)	0.0204	0.0010	mg/Kg wet	0.0200		102	70-130	2.08	20	
Dibromomethane	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130	9.95	20	
1,2-Dichlorobenzene	0.0231	0.0020	mg/Kg wet	0.0200		115	70-130	3.44	20	
1,3-Dichlorobenzene	0.0233	0.0020	mg/Kg wet	0.0200		117	70-130	0.922	20	
1,4-Dichlorobenzene	0.0219	0.0020	mg/Kg wet	0.0200		109	70-130	0.275	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
<b>Batch B225708 - SW-846 5035</b>										
<b>LCS Dup (B225708-BSD1)</b>										
Prepared & Analyzed: 03/14/19										
Dichlorodifluoromethane (Freon 12)	0.0124	0.010	mg/Kg wet	0.0200		61.9	40-160	1.19	20	L-14 †
1,1-Dichloroethane	0.0171	0.0020	mg/Kg wet	0.0200		85.5	70-130	1.47	20	
1,2-Dichloroethane	0.0195	0.0020	mg/Kg wet	0.0200		97.7	70-130	4.11	20	
1,1-Dichloroethylene	0.0174	0.0040	mg/Kg wet	0.0200		87.2	70-130	0.103	20	
cis-1,2-Dichloroethylene	0.0172	0.0020	mg/Kg wet	0.0200		85.9	70-130	0.395	20	
trans-1,2-Dichloroethylene	0.0173	0.0020	mg/Kg wet	0.0200		86.4	70-130	0.669	20	
1,2-Dichloropropane	0.0191	0.0020	mg/Kg wet	0.0200		95.6	70-130	2.00	20	
1,3-Dichloropropane	0.0185	0.0010	mg/Kg wet	0.0200		92.3	70-130	3.15	20	
2,2-Dichloropropane	0.0178	0.0020	mg/Kg wet	0.0200		89.0	70-130	3.64	20	
1,1-Dichloropropene	0.0172	0.0020	mg/Kg wet	0.0200		86.0	70-130	0.221	20	
cis-1,3-Dichloropropene	0.0188	0.0010	mg/Kg wet	0.0200		94.0	70-130	0.812	20	
trans-1,3-Dichloropropene	0.0198	0.0010	mg/Kg wet	0.0200		98.9	70-130	1.22	20	
Diethyl Ether	0.0162	0.010	mg/Kg wet	0.0200		80.9	70-130	0.235	20	
Diisopropyl Ether (DIPE)	0.0176	0.0010	mg/Kg wet	0.0200		88.1	70-130	0.159	20	
1,4-Dioxane	0.192	0.10	mg/Kg wet	0.200		95.8	40-160	6.43	20	†
Ethylbenzene	0.0217	0.0020	mg/Kg wet	0.0200		108	70-130	1.68	20	
Hexachlorobutadiene	0.0246	0.0020	mg/Kg wet	0.0200		123	70-130	1.83	20	
2-Hexanone (MBK)	0.207	0.020	mg/Kg wet	0.200		104	40-160	2.58	20	†
Isopropylbenzene (Cumene)	0.0232	0.0020	mg/Kg wet	0.0200		116	70-130	1.52	20	
p-Isopropyltoluene (p-Cymene)	0.0234	0.0020	mg/Kg wet	0.0200		117	70-130	2.22	20	
Methyl tert-Butyl Ether (MTBE)	0.0179	0.0040	mg/Kg wet	0.0200		89.7	70-130	0.458	20	
Methylene Chloride	0.0165	0.010	mg/Kg wet	0.0200		82.5	70-130	9.86	20	
4-Methyl-2-pentanone (MIBK)	0.204	0.020	mg/Kg wet	0.200		102	40-160	4.88	20	†
Naphthalene	0.0218	0.0040	mg/Kg wet	0.0200		109	70-130	3.93	20	
n-Propylbenzene	0.0227	0.0020	mg/Kg wet	0.0200		114	70-130	3.25	20	
Styrene	0.0224	0.0020	mg/Kg wet	0.0200		112	70-130	3.07	20	
1,1,1,2-Tetrachloroethane	0.0222	0.0020	mg/Kg wet	0.0200		111	70-130	1.47	20	
1,1,2,2-Tetrachloroethane	0.0232	0.0010	mg/Kg wet	0.0200		116	70-130	3.05	20	
Tetrachloroethylene	0.0204	0.0020	mg/Kg wet	0.0200		102	70-130	2.94	20	
Tetrahydrofuran	0.0182	0.010	mg/Kg wet	0.0200		91.0	70-130	5.93	20	
Toluene	0.0191	0.0020	mg/Kg wet	0.0200		95.7	70-130	2.87	20	
1,2,3-Trichlorobenzene	0.0225	0.0020	mg/Kg wet	0.0200		113	70-130	0.0800	20	
1,2,4-Trichlorobenzene	0.0225	0.0020	mg/Kg wet	0.0200		113	70-130	0.543	20	
1,1,1-Trichloroethane	0.0180	0.0020	mg/Kg wet	0.0200		90.2	70-130	2.72	20	
1,1,2-Trichloroethane	0.0201	0.0020	mg/Kg wet	0.0200		100	70-130	4.73	20	
Trichloroethylene	0.0187	0.0020	mg/Kg wet	0.0200		93.3	70-130	1.12	20	
Trichlorofluoromethane (Freon 11)	0.0158	0.010	mg/Kg wet	0.0200		79.2	70-130	1.53	20	
1,2,3-Trichloropropane	0.0207	0.0020	mg/Kg wet	0.0200		104	70-130	6.67	20	
1,2,4-Trimethylbenzene	0.0218	0.0020	mg/Kg wet	0.0200		109	70-130	0.625	20	
1,3,5-Trimethylbenzene	0.0226	0.0020	mg/Kg wet	0.0200		113	70-130	1.13	20	
<b>Vinyl Chloride</b>	0.0134	0.010	mg/Kg wet	0.0200		<b>66.9</b> *	70-130	0.685	20	L-04
m+p Xylene	0.0444	0.0040	mg/Kg wet	0.0400		111	70-130	1.48	20	
o-Xylene	0.0220	0.0020	mg/Kg wet	0.0200		110	70-130	1.01	20	
Surrogate: 1,2-Dichloroethane-d4	0.0493		mg/Kg wet	0.0500		98.6	70-130			
Surrogate: Toluene-d8	0.0476		mg/Kg wet	0.0500		95.1	70-130			
Surrogate: 4-Bromofluorobenzene	0.0484		mg/Kg wet	0.0500		96.9	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 B225764 - SW-846 5035**

**Blank (B225764-BLK1)**

Prepared & Analyzed: 03/14/19

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							
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							V-05
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							
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 B225764 - SW-846 5035**

**Blank (B225764-BLK1)**

Prepared & Analyzed: 03/14/19

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	0.0416		mg/Kg wet	0.0500		83.2	70-130			
Surrogate: Toluene-d8	0.0490		mg/Kg wet	0.0500		98.0	70-130			
Surrogate: 4-Bromofluorobenzene	0.0508		mg/Kg wet	0.0500		102	70-130			

**LCS (B225764-BS1)**

Prepared & Analyzed: 03/14/19

Acetone	0.293	0.10	mg/Kg wet	0.200		146	40-160			L-14 †
tert-Amyl Methyl Ether (TAME)	0.0183	0.0010	mg/Kg wet	0.0200		91.6	70-130			
Benzene	0.0175	0.0020	mg/Kg wet	0.0200		87.4	70-130			
Bromobenzene	0.0185	0.0020	mg/Kg wet	0.0200		92.7	70-130			
Bromochloromethane	0.0186	0.0020	mg/Kg wet	0.0200		93.1	70-130			
Bromodichloromethane	0.0194	0.0020	mg/Kg wet	0.0200		97.0	70-130			
Bromoform	0.0191	0.0020	mg/Kg wet	0.0200		95.4	70-130			
Bromomethane	0.0161	0.010	mg/Kg wet	0.0200		80.4	40-160			V-20, V-34 †
2-Butanone (MEK)	0.191	0.040	mg/Kg wet	0.200		95.4	40-160			†
n-Butylbenzene	0.0184	0.0020	mg/Kg wet	0.0200		92.1	70-130			
sec-Butylbenzene	0.0199	0.0020	mg/Kg wet	0.0200		99.6	70-130			
tert-Butylbenzene	0.0194	0.0020	mg/Kg wet	0.0200		97.2	70-130			
tert-Butyl Ethyl Ether (TBEE)	0.0177	0.0010	mg/Kg wet	0.0200		88.4	70-130			
Carbon Disulfide	0.0255	0.0060	mg/Kg wet	0.0200		128	70-130			
Carbon Tetrachloride	0.0185	0.0020	mg/Kg wet	0.0200		92.3	70-130			
Chlorobenzene	0.0207	0.0020	mg/Kg wet	0.0200		104	70-130			
Chlorodibromomethane	0.0214	0.0010	mg/Kg wet	0.0200		107	70-130			
Chloroethane	0.0219	0.010	mg/Kg wet	0.0200		110	70-130			
Chloroform	0.0183	0.0040	mg/Kg wet	0.0200		91.3	70-130			
Chloromethane	0.0190	0.010	mg/Kg wet	0.0200		94.9	40-160			†
2-Chlorotoluene	0.0189	0.0020	mg/Kg wet	0.0200		94.7	70-130			
4-Chlorotoluene	0.0195	0.0020	mg/Kg wet	0.0200		97.7	70-130			
1,2-Dibromo-3-chloropropane (DBCP)	0.0160	0.0020	mg/Kg wet	0.0200		80.2	70-130			V-05
1,2-Dibromoethane (EDB)	0.0202	0.0010	mg/Kg wet	0.0200		101	70-130			
Dibromomethane	0.0201	0.0020	mg/Kg wet	0.0200		100	70-130			
1,2-Dichlorobenzene	0.0191	0.0020	mg/Kg wet	0.0200		95.5	70-130			
1,3-Dichlorobenzene	0.0205	0.0020	mg/Kg wet	0.0200		102	70-130			
1,4-Dichlorobenzene	0.0194	0.0020	mg/Kg wet	0.0200		97.1	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
<b>Batch B225764 - SW-846 5035</b>										
<b>LCS (B225764-BS1)</b>										
Prepared & Analyzed: 03/14/19										
Dichlorodifluoromethane (Freon 12)	0.0148	0.010	mg/Kg wet	0.0200		74.2	40-160			†
1,1-Dichloroethane	0.0185	0.0020	mg/Kg wet	0.0200		92.7	70-130			
1,2-Dichloroethane	0.0190	0.0020	mg/Kg wet	0.0200		95.0	70-130			
1,1-Dichloroethylene	0.0221	0.0040	mg/Kg wet	0.0200		111	70-130			
cis-1,2-Dichloroethylene	0.0189	0.0020	mg/Kg wet	0.0200		94.5	70-130			
trans-1,2-Dichloroethylene	0.0188	0.0020	mg/Kg wet	0.0200		94.1	70-130			
1,2-Dichloropropane	0.0189	0.0020	mg/Kg wet	0.0200		94.6	70-130			
1,3-Dichloropropane	0.0194	0.0010	mg/Kg wet	0.0200		97.2	70-130			
2,2-Dichloropropane	0.0168	0.0020	mg/Kg wet	0.0200		84.0	70-130			
1,1-Dichloropropene	0.0172	0.0020	mg/Kg wet	0.0200		86.2	70-130			
cis-1,3-Dichloropropene	0.0195	0.0010	mg/Kg wet	0.0200		97.6	70-130			
trans-1,3-Dichloropropene	0.0187	0.0010	mg/Kg wet	0.0200		93.6	70-130			
Diethyl Ether	0.0215	0.010	mg/Kg wet	0.0200		108	70-130			
Diisopropyl Ether (DIPE)	0.0180	0.0010	mg/Kg wet	0.0200		90.2	70-130			
1,4-Dioxane	0.176	0.10	mg/Kg wet	0.200		87.9	40-160			V-16 †
Ethylbenzene	0.0184	0.0020	mg/Kg wet	0.0200		92.2	70-130			
Hexachlorobutadiene	0.0211	0.0020	mg/Kg wet	0.0200		105	70-130			
2-Hexanone (MBK)	0.202	0.020	mg/Kg wet	0.200		101	40-160			†
Isopropylbenzene (Cumene)	0.0224	0.0020	mg/Kg wet	0.0200		112	70-130			
p-Isopropyltoluene (p-Cymene)	0.0194	0.0020	mg/Kg wet	0.0200		97.0	70-130			
Methyl tert-Butyl Ether (MTBE)	0.0182	0.0040	mg/Kg wet	0.0200		91.1	70-130			
Methylene Chloride	0.0180	0.010	mg/Kg wet	0.0200		90.2	70-130			
4-Methyl-2-pentanone (MIBK)	0.201	0.020	mg/Kg wet	0.200		101	40-160			†
Naphthalene	0.0184	0.0040	mg/Kg wet	0.0200		92.2	70-130			
n-Propylbenzene	0.0200	0.0020	mg/Kg wet	0.0200		100	70-130			
Styrene	0.0198	0.0020	mg/Kg wet	0.0200		99.1	70-130			
1,1,1,2-Tetrachloroethane	0.0207	0.0020	mg/Kg wet	0.0200		103	70-130			
1,1,1,2,2-Tetrachloroethane	0.0177	0.0010	mg/Kg wet	0.0200		88.4	70-130			
Tetrachloroethylene	0.0230	0.0020	mg/Kg wet	0.0200		115	70-130			
Tetrahydrofuran	0.0193	0.010	mg/Kg wet	0.0200		96.7	70-130			
Toluene	0.0195	0.0020	mg/Kg wet	0.0200		97.3	70-130			
1,2,3-Trichlorobenzene	0.0198	0.0020	mg/Kg wet	0.0200		98.9	70-130			
1,2,4-Trichlorobenzene	0.0214	0.0020	mg/Kg wet	0.0200		107	70-130			
1,1,1-Trichloroethane	0.0175	0.0020	mg/Kg wet	0.0200		87.7	70-130			
1,1,2-Trichloroethane	0.0186	0.0020	mg/Kg wet	0.0200		93.1	70-130			
Trichloroethylene	0.0192	0.0020	mg/Kg wet	0.0200		96.2	70-130			
Trichlorofluoromethane (Freon 11)	0.0192	0.010	mg/Kg wet	0.0200		96.1	70-130			
1,2,3-Trichloropropane	0.0191	0.0020	mg/Kg wet	0.0200		95.7	70-130			
1,2,4-Trimethylbenzene	0.0172	0.0020	mg/Kg wet	0.0200		86.0	70-130			
1,3,5-Trimethylbenzene	0.0188	0.0020	mg/Kg wet	0.0200		94.1	70-130			
Vinyl Chloride	0.0184	0.010	mg/Kg wet	0.0200		92.0	70-130			
m+p Xylene	0.0373	0.0040	mg/Kg wet	0.0400		93.3	70-130			
o-Xylene	0.0189	0.0020	mg/Kg wet	0.0200		94.3	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0420		mg/Kg wet	0.0500		83.9	70-130			
Surrogate: Toluene-d8	0.0494		mg/Kg wet	0.0500		98.8	70-130			
Surrogate: 4-Bromofluorobenzene	0.0499		mg/Kg wet	0.0500		99.8	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
<b>Batch B225764 - SW-846 5035</b>										
<b>LCS Dup (B225764-BSD1)</b>										
Prepared & Analyzed: 03/14/19										
Acetone	0.291	0.10	mg/Kg wet	0.200		145	40-160	0.583	20	L-14 †
tert-Amyl Methyl Ether (TAME)	0.0184	0.0010	mg/Kg wet	0.0200		91.9	70-130	0.327	20	
Benzene	0.0180	0.0020	mg/Kg wet	0.0200		89.8	70-130	2.71	20	
Bromobenzene	0.0180	0.0020	mg/Kg wet	0.0200		90.0	70-130	2.96	20	
Bromochloromethane	0.0191	0.0020	mg/Kg wet	0.0200		95.5	70-130	2.55	20	
Bromodichloromethane	0.0190	0.0020	mg/Kg wet	0.0200		94.9	70-130	2.19	20	
Bromoform	0.0185	0.0020	mg/Kg wet	0.0200		92.5	70-130	3.09	20	
Bromomethane	0.0195	0.010	mg/Kg wet	0.0200		97.4	40-160	19.1	20	V-20, V-34 †
2-Butanone (MEK)	0.189	0.040	mg/Kg wet	0.200		94.5	40-160	0.864	20	†
n-Butylbenzene	0.0175	0.0020	mg/Kg wet	0.0200		87.6	70-130	5.01	20	
sec-Butylbenzene	0.0193	0.0020	mg/Kg wet	0.0200		96.4	70-130	3.27	20	
tert-Butylbenzene	0.0184	0.0020	mg/Kg wet	0.0200		92.0	70-130	5.50	20	
tert-Butyl Ethyl Ether (TBEE)	0.0176	0.0010	mg/Kg wet	0.0200		88.0	70-130	0.454	20	
Carbon Disulfide	0.0256	0.0060	mg/Kg wet	0.0200		128	70-130	0.469	20	
Carbon Tetrachloride	0.0185	0.0020	mg/Kg wet	0.0200		92.3	70-130	0.00	20	
Chlorobenzene	0.0209	0.0020	mg/Kg wet	0.0200		104	70-130	0.673	20	
Chlorodibromomethane	0.0203	0.0010	mg/Kg wet	0.0200		102	70-130	5.18	20	
Chloroethane	0.0195	0.010	mg/Kg wet	0.0200		97.5	70-130	11.8	20	
Chloroform	0.0182	0.0040	mg/Kg wet	0.0200		91.1	70-130	0.219	20	
Chloromethane	0.0195	0.010	mg/Kg wet	0.0200		97.7	40-160	2.91	20	†
2-Chlorotoluene	0.0190	0.0020	mg/Kg wet	0.0200		94.8	70-130	0.106	20	
4-Chlorotoluene	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130	3.52	20	
1,2-Dibromo-3-chloropropane (DBCP)	0.0157	0.0020	mg/Kg wet	0.0200		78.4	70-130	2.27	20	V-05
1,2-Dibromoethane (EDB)	0.0198	0.0010	mg/Kg wet	0.0200		98.9	70-130	2.00	20	
Dibromomethane	0.0208	0.0020	mg/Kg wet	0.0200		104	70-130	3.43	20	
1,2-Dichlorobenzene	0.0191	0.0020	mg/Kg wet	0.0200		95.3	70-130	0.210	20	
1,3-Dichlorobenzene	0.0189	0.0020	mg/Kg wet	0.0200		94.4	70-130	8.03	20	
1,4-Dichlorobenzene	0.0193	0.0020	mg/Kg wet	0.0200		96.4	70-130	0.724	20	
Dichlorodifluoromethane (Freon 12)	0.0142	0.010	mg/Kg wet	0.0200		71.1	40-160	4.27	20	†
1,1-Dichloroethane	0.0184	0.0020	mg/Kg wet	0.0200		91.8	70-130	0.976	20	
1,2-Dichloroethane	0.0187	0.0020	mg/Kg wet	0.0200		93.7	70-130	1.38	20	
1,1-Dichloroethylene	0.0225	0.0040	mg/Kg wet	0.0200		112	70-130	1.43	20	
cis-1,2-Dichloroethylene	0.0192	0.0020	mg/Kg wet	0.0200		96.0	70-130	1.57	20	
trans-1,2-Dichloroethylene	0.0198	0.0020	mg/Kg wet	0.0200		98.8	70-130	4.87	20	
1,2-Dichloropropane	0.0187	0.0020	mg/Kg wet	0.0200		93.3	70-130	1.38	20	
1,3-Dichloropropane	0.0190	0.0010	mg/Kg wet	0.0200		94.8	70-130	2.50	20	
2,2-Dichloropropane	0.0172	0.0020	mg/Kg wet	0.0200		85.8	70-130	2.12	20	
1,1-Dichloropropene	0.0173	0.0020	mg/Kg wet	0.0200		86.7	70-130	0.578	20	
cis-1,3-Dichloropropene	0.0194	0.0010	mg/Kg wet	0.0200		96.8	70-130	0.823	20	
trans-1,3-Dichloropropene	0.0176	0.0010	mg/Kg wet	0.0200		88.1	70-130	6.05	20	
Diethyl Ether	0.0227	0.010	mg/Kg wet	0.0200		113	70-130	5.16	20	
Diisopropyl Ether (DIPE)	0.0184	0.0010	mg/Kg wet	0.0200		92.0	70-130	1.98	20	
1,4-Dioxane	0.164	0.10	mg/Kg wet	0.200		82.2	40-160	6.64	20	V-16 †
Ethylbenzene	0.0191	0.0020	mg/Kg wet	0.0200		95.5	70-130	3.52	20	
Hexachlorobutadiene	0.0211	0.0020	mg/Kg wet	0.0200		105	70-130	0.00	20	
2-Hexanone (MBK)	0.198	0.020	mg/Kg wet	0.200		98.8	40-160	2.31	20	†
Isopropylbenzene (Cumene)	0.0197	0.0020	mg/Kg wet	0.0200		98.4	70-130	12.9	20	
p-Isopropyltoluene (p-Cymene)	0.0190	0.0020	mg/Kg wet	0.0200		94.8	70-130	2.29	20	
Methyl tert-Butyl Ether (MTBE)	0.0179	0.0040	mg/Kg wet	0.0200		89.3	70-130	2.00	20	
Methylene Chloride	0.0183	0.010	mg/Kg wet	0.0200		91.6	70-130	1.54	20	
4-Methyl-2-pentanone (MIBK)	0.194	0.020	mg/Kg wet	0.200		97.2	40-160	3.46	20	†
Naphthalene	0.0177	0.0040	mg/Kg wet	0.0200		88.4	70-130	4.21	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
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**Batch B225764 - SW-846 5035**

**LCS Dup (B225764-BSD1)**

Prepared & Analyzed: 03/14/19

n-Propylbenzene	0.0203	0.0020	mg/Kg wet	0.0200		101	70-130	1.19	20	
Styrene	0.0205	0.0020	mg/Kg wet	0.0200		103	70-130	3.47	20	
1,1,1,2-Tetrachloroethane	0.0219	0.0020	mg/Kg wet	0.0200		110	70-130	5.92	20	
1,1,2,2-Tetrachloroethane	0.0177	0.0010	mg/Kg wet	0.0200		88.4	70-130	0.00	20	
Tetrachloroethylene	0.0235	0.0020	mg/Kg wet	0.0200		118	70-130	2.41	20	
Tetrahydrofuran	0.0202	0.010	mg/Kg wet	0.0200		101	70-130	4.35	20	
Toluene	0.0193	0.0020	mg/Kg wet	0.0200		96.7	70-130	0.619	20	
1,2,3-Trichlorobenzene	0.0180	0.0020	mg/Kg wet	0.0200		90.0	70-130	9.42	20	
1,2,4-Trichlorobenzene	0.0191	0.0020	mg/Kg wet	0.0200		95.5	70-130	11.2	20	
1,1,1-Trichloroethane	0.0170	0.0020	mg/Kg wet	0.0200		85.1	70-130	3.01	20	
1,1,2-Trichloroethane	0.0189	0.0020	mg/Kg wet	0.0200		94.6	70-130	1.60	20	
Trichloroethylene	0.0187	0.0020	mg/Kg wet	0.0200		93.4	70-130	2.95	20	
Trichlorofluoromethane (Freon 11)	0.0200	0.010	mg/Kg wet	0.0200		100	70-130	3.98	20	
1,2,3-Trichloropropane	0.0178	0.0020	mg/Kg wet	0.0200		88.8	70-130	7.48	20	
1,2,4-Trimethylbenzene	0.0169	0.0020	mg/Kg wet	0.0200		84.7	70-130	1.52	20	
1,3,5-Trimethylbenzene	0.0197	0.0020	mg/Kg wet	0.0200		98.4	70-130	4.47	20	
Vinyl Chloride	0.0186	0.010	mg/Kg wet	0.0200		93.0	70-130	1.08	20	
m+p Xylene	0.0376	0.0040	mg/Kg wet	0.0400		94.0	70-130	0.748	20	
o-Xylene	0.0187	0.0020	mg/Kg wet	0.0200		93.5	70-130	0.852	20	
Surrogate: 1,2-Dichloroethane-d4	0.0423		mg/Kg wet	0.0500		84.7	70-130			
Surrogate: Toluene-d8	0.0493		mg/Kg wet	0.0500		98.6	70-130			
Surrogate: 4-Bromofluorobenzene	0.0508		mg/Kg wet	0.0500		102	70-130			

**Batch B225768 - SW-846 5035**

**Blank (B225768-BLK1)**

Prepared & Analyzed: 03/14/19

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							
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							



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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
<b>Batch B225768 - SW-846 5035</b>										
<b>Blank (B225768-BLK1)</b>										
Prepared & Analyzed: 03/14/19										
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							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-05, 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							
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	0.0452		mg/Kg wet	0.0500		90.4	70-130			
Surrogate: Toluene-d8	0.0479		mg/Kg wet	0.0500		95.7	70-130			
Surrogate: 4-Bromofluorobenzene	0.0482		mg/Kg wet	0.0500		96.4	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
<b>Batch B225768 - SW-846 5035</b>										
<b>LCS (B225768-BS1)</b>										
Prepared & Analyzed: 03/14/19										
Acetone	0.232	0.10	mg/Kg wet	0.200		116	40-160			†
tert-Amyl Methyl Ether (TAME)	0.0174	0.0010	mg/Kg wet	0.0200		87.2	70-130			
Benzene	0.0172	0.0020	mg/Kg wet	0.0200		86.0	70-130			
Bromobenzene	0.0192	0.0020	mg/Kg wet	0.0200		96.1	70-130			
Bromochloromethane	0.0174	0.0020	mg/Kg wet	0.0200		87.0	70-130			
Bromodichloromethane	0.0184	0.0020	mg/Kg wet	0.0200		92.0	70-130			
Bromoform	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130			
Bromomethane	0.0180	0.010	mg/Kg wet	0.0200		90.0	40-160			V-34 †
2-Butanone (MEK)	0.168	0.040	mg/Kg wet	0.200		83.9	40-160			†
n-Butylbenzene	0.0189	0.0020	mg/Kg wet	0.0200		94.3	70-130			
sec-Butylbenzene	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130			
tert-Butylbenzene	0.0197	0.0020	mg/Kg wet	0.0200		98.4	70-130			
tert-Butyl Ethyl Ether (TBEE)	0.0165	0.0010	mg/Kg wet	0.0200		82.5	70-130			
Carbon Disulfide	0.0244	0.0060	mg/Kg wet	0.0200		122	70-130			
Carbon Tetrachloride	0.0167	0.0020	mg/Kg wet	0.0200		83.5	70-130			
Chlorobenzene	0.0212	0.0020	mg/Kg wet	0.0200		106	70-130			
Chlorodibromomethane	0.0198	0.0010	mg/Kg wet	0.0200		99.2	70-130			
Chloroethane	0.0193	0.010	mg/Kg wet	0.0200		96.6	70-130			
Chloroform	0.0172	0.0040	mg/Kg wet	0.0200		86.1	70-130			
Chloromethane	0.0179	0.010	mg/Kg wet	0.0200		89.4	40-160			†
2-Chlorotoluene	0.0200	0.0020	mg/Kg wet	0.0200		100	70-130			
4-Chlorotoluene	0.0198	0.0020	mg/Kg wet	0.0200		99.2	70-130			
1,2-Dibromo-3-chloropropane (DBCP)	0.0161	0.0020	mg/Kg wet	0.0200		80.7	70-130			
1,2-Dibromoethane (EDB)	0.0190	0.0010	mg/Kg wet	0.0200		95.0	70-130			
Dibromomethane	0.0195	0.0020	mg/Kg wet	0.0200		97.3	70-130			
1,2-Dichlorobenzene	0.0222	0.0020	mg/Kg wet	0.0200		111	70-130			
1,3-Dichlorobenzene	0.0212	0.0020	mg/Kg wet	0.0200		106	70-130			
1,4-Dichlorobenzene	0.0203	0.0020	mg/Kg wet	0.0200		102	70-130			
Dichlorodifluoromethane (Freon 12)	0.0141	0.010	mg/Kg wet	0.0200		70.4	40-160			†
1,1-Dichloroethane	0.0179	0.0020	mg/Kg wet	0.0200		89.4	70-130			
1,2-Dichloroethane	0.0189	0.0020	mg/Kg wet	0.0200		94.6	70-130			
1,1-Dichloroethylene	0.0215	0.0040	mg/Kg wet	0.0200		108	70-130			
cis-1,2-Dichloroethylene	0.0180	0.0020	mg/Kg wet	0.0200		90.0	70-130			
trans-1,2-Dichloroethylene	0.0185	0.0020	mg/Kg wet	0.0200		92.6	70-130			
1,2-Dichloropropane	0.0196	0.0020	mg/Kg wet	0.0200		98.0	70-130			
1,3-Dichloropropane	0.0181	0.0010	mg/Kg wet	0.0200		90.4	70-130			
2,2-Dichloropropane	0.0162	0.0020	mg/Kg wet	0.0200		81.1	70-130			V-05
1,1-Dichloropropene	0.0173	0.0020	mg/Kg wet	0.0200		86.5	70-130			
cis-1,3-Dichloropropene	0.0194	0.0010	mg/Kg wet	0.0200		97.0	70-130			
trans-1,3-Dichloropropene	0.0174	0.0010	mg/Kg wet	0.0200		87.0	70-130			
Diethyl Ether	0.0218	0.010	mg/Kg wet	0.0200		109	70-130			
Diisopropyl Ether (DIPE)	0.0176	0.0010	mg/Kg wet	0.0200		88.0	70-130			
1,4-Dioxane	0.156	0.10	mg/Kg wet	0.200		78.2	40-160			V-05, V-16 †
Ethylbenzene	0.0194	0.0020	mg/Kg wet	0.0200		96.9	70-130			
Hexachlorobutadiene	0.0207	0.0020	mg/Kg wet	0.0200		103	70-130			
2-Hexanone (MBK)	0.182	0.020	mg/Kg wet	0.200		91.0	40-160			†
Isopropylbenzene (Cumene)	0.0222	0.0020	mg/Kg wet	0.0200		111	70-130			
p-Isopropyltoluene (p-Cymene)	0.0199	0.0020	mg/Kg wet	0.0200		99.5	70-130			
Methyl tert-Butyl Ether (MTBE)	0.0171	0.0040	mg/Kg wet	0.0200		85.7	70-130			
Methylene Chloride	0.0175	0.010	mg/Kg wet	0.0200		87.5	70-130			
4-Methyl-2-pentanone (MIBK)	0.187	0.020	mg/Kg wet	0.200		93.3	40-160			†
Naphthalene	0.0186	0.0040	mg/Kg wet	0.0200		92.8	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 B225768 - SW-846 5035

LCS (B225768-BS1)

Prepared & Analyzed: 03/14/19

n-Propylbenzene	0.0208	0.0020	mg/Kg wet	0.0200		104	70-130			
Styrene	0.0206	0.0020	mg/Kg wet	0.0200		103	70-130			
1,1,1,2-Tetrachloroethane	0.0214	0.0020	mg/Kg wet	0.0200		107	70-130			
1,1,2,2-Tetrachloroethane	0.0184	0.0010	mg/Kg wet	0.0200		91.9	70-130			
Tetrachloroethylene	0.0221	0.0020	mg/Kg wet	0.0200		111	70-130			
Tetrahydrofuran	0.0165	0.010	mg/Kg wet	0.0200		82.5	70-130			
Toluene	0.0196	0.0020	mg/Kg wet	0.0200		97.8	70-130			
1,2,3-Trichlorobenzene	0.0200	0.0020	mg/Kg wet	0.0200		100	70-130			
1,2,4-Trichlorobenzene	0.0201	0.0020	mg/Kg wet	0.0200		100	70-130			
1,1,1-Trichloroethane	0.0174	0.0020	mg/Kg wet	0.0200		86.8	70-130			
1,1,2-Trichloroethane	0.0171	0.0020	mg/Kg wet	0.0200		85.5	70-130			
Trichloroethylene	0.0190	0.0020	mg/Kg wet	0.0200		95.0	70-130			
Trichlorofluoromethane (Freon 11)	0.0198	0.010	mg/Kg wet	0.0200		98.8	70-130			
1,2,3-Trichloropropane	0.0172	0.0020	mg/Kg wet	0.0200		86.0	70-130			
1,2,4-Trimethylbenzene	0.0183	0.0020	mg/Kg wet	0.0200		91.4	70-130			
1,3,5-Trimethylbenzene	0.0192	0.0020	mg/Kg wet	0.0200		96.0	70-130			
Vinyl Chloride	0.0186	0.010	mg/Kg wet	0.0200		92.8	70-130			
m+p Xylene	0.0373	0.0040	mg/Kg wet	0.0400		93.3	70-130			
o-Xylene	0.0189	0.0020	mg/Kg wet	0.0200		94.5	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0438		mg/Kg wet	0.0500		87.5	70-130			
Surrogate: Toluene-d8	0.0495		mg/Kg wet	0.0500		98.9	70-130			
Surrogate: 4-Bromofluorobenzene	0.0493		mg/Kg wet	0.0500		98.5	70-130			

LCS Dup (B225768-BS1)

Prepared & Analyzed: 03/14/19

Acetone	0.227	0.10	mg/Kg wet	0.200		113	40-160	2.42	20	†
tert-Amyl Methyl Ether (TAME)	0.0169	0.0010	mg/Kg wet	0.0200		84.7	70-130	2.91	20	
Benzene	0.0165	0.0020	mg/Kg wet	0.0200		82.6	70-130	4.03	20	
Bromobenzene	0.0186	0.0020	mg/Kg wet	0.0200		93.1	70-130	3.17	20	
Bromochloromethane	0.0179	0.0020	mg/Kg wet	0.0200		89.4	70-130	2.72	20	
Bromodichloromethane	0.0185	0.0020	mg/Kg wet	0.0200		92.7	70-130	0.758	20	
Bromoform	0.0199	0.0020	mg/Kg wet	0.0200		99.5	70-130	1.60	20	
Bromomethane	0.0173	0.010	mg/Kg wet	0.0200		86.6	40-160	3.85	20	V-34 †
2-Butanone (MEK)	0.170	0.040	mg/Kg wet	0.200		84.8	40-160	1.07	20	†
n-Butylbenzene	0.0189	0.0020	mg/Kg wet	0.0200		94.7	70-130	0.423	20	
sec-Butylbenzene	0.0204	0.0020	mg/Kg wet	0.0200		102	70-130	1.28	20	
tert-Butylbenzene	0.0195	0.0020	mg/Kg wet	0.0200		97.5	70-130	0.919	20	
tert-Butyl Ethyl Ether (TBEE)	0.0166	0.0010	mg/Kg wet	0.0200		83.2	70-130	0.845	20	
Carbon Disulfide	0.0240	0.0060	mg/Kg wet	0.0200		120	70-130	1.74	20	
Carbon Tetrachloride	0.0175	0.0020	mg/Kg wet	0.0200		87.4	70-130	4.56	20	
Chlorobenzene	0.0216	0.0020	mg/Kg wet	0.0200		108	70-130	1.87	20	
Chlorodibromomethane	0.0199	0.0010	mg/Kg wet	0.0200		99.4	70-130	0.201	20	
Chloroethane	0.0197	0.010	mg/Kg wet	0.0200		98.5	70-130	1.95	20	
Chloroform	0.0175	0.0040	mg/Kg wet	0.0200		87.4	70-130	1.50	20	
Chloromethane	0.0177	0.010	mg/Kg wet	0.0200		88.7	40-160	0.786	20	†
2-Chlorotoluene	0.0189	0.0020	mg/Kg wet	0.0200		94.3	70-130	5.97	20	
4-Chlorotoluene	0.0199	0.0020	mg/Kg wet	0.0200		99.7	70-130	0.503	20	
1,2-Dibromo-3-chloropropane (DBCP)	0.0169	0.0020	mg/Kg wet	0.0200		84.3	70-130	4.36	20	
1,2-Dibromoethane (EDB)	0.0186	0.0010	mg/Kg wet	0.0200		93.2	70-130	1.91	20	
Dibromomethane	0.0191	0.0020	mg/Kg wet	0.0200		95.6	70-130	1.76	20	
1,2-Dichlorobenzene	0.0207	0.0020	mg/Kg wet	0.0200		104	70-130	7.08	20	
1,3-Dichlorobenzene	0.0215	0.0020	mg/Kg wet	0.0200		107	70-130	1.22	20	
1,4-Dichlorobenzene	0.0201	0.0020	mg/Kg wet	0.0200		100	70-130	1.29	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
<b>Batch B225768 - SW-846 5035</b>										
<b>LCS Dup (B225768-BSD1)</b>										
Prepared & Analyzed: 03/14/19										
Dichlorodifluoromethane (Freon 12)	0.0128	0.010	mg/Kg wet	0.0200		64.0	40-160	9.52	20	L-14 †
1,1-Dichloroethane	0.0176	0.0020	mg/Kg wet	0.0200		88.0	70-130	1.58	20	
1,2-Dichloroethane	0.0174	0.0020	mg/Kg wet	0.0200		86.9	70-130	8.48	20	
1,1-Dichloroethylene	0.0215	0.0040	mg/Kg wet	0.0200		108	70-130	0.00	20	
cis-1,2-Dichloroethylene	0.0181	0.0020	mg/Kg wet	0.0200		90.5	70-130	0.554	20	
trans-1,2-Dichloroethylene	0.0177	0.0020	mg/Kg wet	0.0200		88.3	70-130	4.75	20	
1,2-Dichloropropane	0.0189	0.0020	mg/Kg wet	0.0200		94.5	70-130	3.64	20	
1,3-Dichloropropane	0.0180	0.0010	mg/Kg wet	0.0200		90.1	70-130	0.332	20	
2,2-Dichloropropane	0.0151	0.0020	mg/Kg wet	0.0200		75.7	70-130	6.89	20	V-05
1,1-Dichloropropene	0.0149	0.0020	mg/Kg wet	0.0200		74.6	70-130	14.8	20	
cis-1,3-Dichloropropene	0.0187	0.0010	mg/Kg wet	0.0200		93.6	70-130	3.57	20	
trans-1,3-Dichloropropene	0.0170	0.0010	mg/Kg wet	0.0200		85.1	70-130	2.21	20	
Diethyl Ether	0.0216	0.010	mg/Kg wet	0.0200		108	70-130	0.921	20	
Diisopropyl Ether (DIPE)	0.0174	0.0010	mg/Kg wet	0.0200		86.9	70-130	1.26	20	
1,4-Dioxane	0.137	0.10	mg/Kg wet	0.200		68.4	40-160	13.4	20	L-14, V-05, V-16 †
Ethylbenzene	0.0186	0.0020	mg/Kg wet	0.0200		93.0	70-130	4.11	20	
Hexachlorobutadiene	0.0211	0.0020	mg/Kg wet	0.0200		105	70-130	1.82	20	
2-Hexanone (MBK)	0.180	0.020	mg/Kg wet	0.200		90.0	40-160	1.07	20	†
Isopropylbenzene (Cumene)	0.0207	0.0020	mg/Kg wet	0.0200		104	70-130	6.80	20	
p-Isopropyltoluene (p-Cymene)	0.0190	0.0020	mg/Kg wet	0.0200		95.2	70-130	4.42	20	
Methyl tert-Butyl Ether (MTBE)	0.0164	0.0040	mg/Kg wet	0.0200		82.1	70-130	4.29	20	
Methylene Chloride	0.0173	0.010	mg/Kg wet	0.0200		86.3	70-130	1.38	20	
4-Methyl-2-pentanone (MIBK)	0.185	0.020	mg/Kg wet	0.200		92.7	40-160	0.591	20	†
Naphthalene	0.0171	0.0040	mg/Kg wet	0.0200		85.5	70-130	8.19	20	
n-Propylbenzene	0.0206	0.0020	mg/Kg wet	0.0200		103	70-130	1.26	20	
Styrene	0.0204	0.0020	mg/Kg wet	0.0200		102	70-130	0.585	20	
1,1,1,2-Tetrachloroethane	0.0204	0.0020	mg/Kg wet	0.0200		102	70-130	4.78	20	
1,1,2,2-Tetrachloroethane	0.0181	0.0010	mg/Kg wet	0.0200		90.7	70-130	1.31	20	
Tetrachloroethylene	0.0208	0.0020	mg/Kg wet	0.0200		104	70-130	6.25	20	
Tetrahydrofuran	0.0186	0.010	mg/Kg wet	0.0200		93.2	70-130	12.2	20	
Toluene	0.0189	0.0020	mg/Kg wet	0.0200		94.4	70-130	3.54	20	
1,2,3-Trichlorobenzene	0.0186	0.0020	mg/Kg wet	0.0200		93.2	70-130	7.14	20	
1,2,4-Trichlorobenzene	0.0189	0.0020	mg/Kg wet	0.0200		94.6	70-130	5.85	20	
1,1,1-Trichloroethane	0.0164	0.0020	mg/Kg wet	0.0200		81.8	70-130	5.93	20	
1,1,2-Trichloroethane	0.0173	0.0020	mg/Kg wet	0.0200		86.3	70-130	0.931	20	
Trichloroethylene	0.0187	0.0020	mg/Kg wet	0.0200		93.3	70-130	1.81	20	
Trichlorofluoromethane (Freon 11)	0.0199	0.010	mg/Kg wet	0.0200		99.3	70-130	0.505	20	
1,2,3-Trichloropropane	0.0176	0.0020	mg/Kg wet	0.0200		88.2	70-130	2.53	20	
1,2,4-Trimethylbenzene	0.0186	0.0020	mg/Kg wet	0.0200		92.8	70-130	1.52	20	
1,3,5-Trimethylbenzene	0.0190	0.0020	mg/Kg wet	0.0200		95.2	70-130	0.837	20	
Vinyl Chloride	0.0174	0.010	mg/Kg wet	0.0200		87.2	70-130	6.22	20	
m+p Xylene	0.0377	0.0040	mg/Kg wet	0.0400		94.4	70-130	1.17	20	
o-Xylene	0.0200	0.0020	mg/Kg wet	0.0200		99.8	70-130	5.46	20	
Surrogate: 1,2-Dichloroethane-d4	0.0442		mg/Kg wet	0.0500		88.5	70-130			
Surrogate: Toluene-d8	0.0499		mg/Kg wet	0.0500		99.8	70-130			
Surrogate: 4-Bromofluorobenzene	0.0486		mg/Kg wet	0.0500		97.2	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
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**Batch B225813 - SW-846 3546**

**Blank (B225813-BLK1)**

Prepared: 03/15/19 Analyzed: 03/18/19

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							
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							
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							
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							
2,4-Dinitrophenol	ND	0.66	mg/Kg wet							
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							
1,2-Diphenylhydrazine/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							

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
<b>Batch B225813 - SW-846 3546</b>										
<b>Blank (B225813-BLK1)</b>										
Prepared: 03/15/19 Analyzed: 03/18/19										
Phenol	ND	0.34	mg/Kg wet							
Pyrene	ND	0.17	mg/Kg wet							
Pyridine	ND	0.34	mg/Kg wet							
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	3.54		mg/Kg wet	6.67		53.1	30-130			
Surrogate: Phenol-d6	3.67		mg/Kg wet	6.67		55.0	30-130			
Surrogate: Nitrobenzene-d5	1.89		mg/Kg wet	3.33		56.7	30-130			
Surrogate: 2-Fluorobiphenyl	1.99		mg/Kg wet	3.33		59.8	30-130			
Surrogate: 2,4,6-Tribromophenol	4.85		mg/Kg wet	6.67		72.7	30-130			
Surrogate: p-Terphenyl-d14	2.72		mg/Kg wet	3.33		81.6	30-130			
<b>LCS (B225813-BS1)</b>										
Prepared: 03/15/19 Analyzed: 03/18/19										
Acenaphthene	1.25	0.17	mg/Kg wet	1.67		74.8	40-140			
Acenaphthylene	1.23	0.17	mg/Kg wet	1.67		74.0	40-140			
Acetophenone	1.12	0.34	mg/Kg wet	1.67		67.2	40-140			
<b>Aniline</b>	0.453	0.34	mg/Kg wet	1.67		27.2 *	40-140			L-04, V-34
Anthracene	1.37	0.17	mg/Kg wet	1.67		82.4	40-140			
Benzo(a)anthracene	1.32	0.17	mg/Kg wet	1.67		79.4	40-140			
Benzo(a)pyrene	1.45	0.17	mg/Kg wet	1.67		87.1	40-140			
Benzo(b)fluoranthene	1.37	0.17	mg/Kg wet	1.67		82.3	40-140			
Benzo(g,h,i)perylene	1.65	0.17	mg/Kg wet	1.67		98.8	40-140			
Benzo(k)fluoranthene	1.40	0.17	mg/Kg wet	1.67		84.2	40-140			
Bis(2-chloroethoxy)methane	1.36	0.34	mg/Kg wet	1.67		81.5	40-140			
Bis(2-chloroethyl)ether	1.15	0.34	mg/Kg wet	1.67		69.2	40-140			
Bis(2-chloroisopropyl)ether	1.23	0.34	mg/Kg wet	1.67		74.0	40-140			
Bis(2-Ethylhexyl)phthalate	1.37	0.34	mg/Kg wet	1.67		82.5	40-140			
4-Bromophenylphenylether	1.37	0.34	mg/Kg wet	1.67		82.1	40-140			
Butylbenzylphthalate	1.44	0.34	mg/Kg wet	1.67		86.2	40-140			
4-Chloroaniline	0.569	0.66	mg/Kg wet	1.67		34.1	15-140			V-34 †
2-Chloronaphthalene	1.13	0.34	mg/Kg wet	1.67		68.0	40-140			
2-Chlorophenol	1.14	0.34	mg/Kg wet	1.67		68.6	30-130			
Chrysene	1.38	0.17	mg/Kg wet	1.67		82.8	40-140			
Dibenz(a,h)anthracene	1.50	0.17	mg/Kg wet	1.67		89.7	40-140			
Dibenzofuran	1.31	0.34	mg/Kg wet	1.67		78.7	40-140			
Di-n-butylphthalate	1.36	0.34	mg/Kg wet	1.67		81.5	40-140			
1,2-Dichlorobenzene	0.978	0.34	mg/Kg wet	1.67		58.7	40-140			
1,3-Dichlorobenzene	0.925	0.34	mg/Kg wet	1.67		55.5	40-140			
1,4-Dichlorobenzene	0.952	0.34	mg/Kg wet	1.67		57.1	40-140			
3,3-Dichlorobenzidine	0.674	0.17	mg/Kg wet	1.67		40.4	40-140			V-34
2,4-Dichlorophenol	1.19	0.34	mg/Kg wet	1.67		71.3	30-130			
Diethylphthalate	1.36	0.34	mg/Kg wet	1.67		81.7	40-140			
2,4-Dimethylphenol	1.25	0.34	mg/Kg wet	1.67		74.9	30-130			
Dimethylphthalate	1.35	0.34	mg/Kg wet	1.67		81.1	40-140			
2,4-Dinitrophenol	0.981	0.66	mg/Kg wet	1.67		58.8	15-140			†
2,4-Dinitrotoluene	1.37	0.34	mg/Kg wet	1.67		81.9	40-140			
2,6-Dinitrotoluene	1.38	0.34	mg/Kg wet	1.67		83.0	40-140			
Di-n-octylphthalate	1.30	0.34	mg/Kg wet	1.67		78.2	40-140			
1,2-Diphenylhydrazine/Azobenzene	1.35	0.34	mg/Kg wet	1.67		81.0	40-140			
Fluoranthene	1.36	0.17	mg/Kg wet	1.67		81.4	40-140			
Fluorene	1.33	0.17	mg/Kg wet	1.67		79.7	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
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**Batch B225813 - SW-846 3546**

**LCS (B225813-BS1)**

Prepared: 03/15/19 Analyzed: 03/18/19

Hexachlorobenzene	1.32	0.34	mg/Kg wet	1.67		79.3	40-140			
Hexachlorobutadiene	1.02	0.34	mg/Kg wet	1.67		61.4	40-140			
Hexachloroethane	0.979	0.34	mg/Kg wet	1.67		58.7	40-140			
Indeno(1,2,3-cd)pyrene	1.53	0.17	mg/Kg wet	1.67		91.6	40-140			
Isophorone	1.23	0.34	mg/Kg wet	1.67		73.7	40-140			
2-Methylnaphthalene	1.24	0.17	mg/Kg wet	1.67		74.7	40-140			
2-Methylphenol	1.01	0.34	mg/Kg wet	1.67		60.3	30-130			
3/4-Methylphenol	1.17	0.34	mg/Kg wet	1.67		70.0	30-130			
Naphthalene	1.12	0.17	mg/Kg wet	1.67		67.2	40-140			
Nitrobenzene	1.12	0.34	mg/Kg wet	1.67		67.5	40-140			
2-Nitrophenol	1.20	0.34	mg/Kg wet	1.67		72.2	30-130			
4-Nitrophenol	1.45	0.66	mg/Kg wet	1.67		87.1	15-140			†
Pentachlorophenol	1.36	0.34	mg/Kg wet	1.67		81.4	30-130			
Phenanthrene	1.37	0.17	mg/Kg wet	1.67		82.4	40-140			
Phenol	1.17	0.34	mg/Kg wet	1.67		70.4	15-140			†
Pyrene	1.43	0.17	mg/Kg wet	1.67		85.9	40-140			
Pyridine	0.777	0.34	mg/Kg wet	1.67		46.6	30-140			†
1,2,4-Trichlorobenzene	1.09	0.34	mg/Kg wet	1.67		65.4	40-140			
2,4,5-Trichlorophenol	1.29	0.34	mg/Kg wet	1.67		77.7	30-130			
2,4,6-Trichlorophenol	1.39	0.34	mg/Kg wet	1.67		83.4	30-130			
Surrogate: 2-Fluorophenol	4.36		mg/Kg wet	6.67		65.5	30-130			
Surrogate: Phenol-d6	4.75		mg/Kg wet	6.67		71.2	30-130			
Surrogate: Nitrobenzene-d5	2.35		mg/Kg wet	3.33		70.6	30-130			
Surrogate: 2-Fluorobiphenyl	2.60		mg/Kg wet	3.33		78.1	30-130			
Surrogate: 2,4,6-Tribromophenol	5.91		mg/Kg wet	6.67		88.6	30-130			
Surrogate: p-Terphenyl-d14	3.10		mg/Kg wet	3.33		93.1	30-130			

**LCS Dup (B225813-BS1)**

Prepared: 03/15/19 Analyzed: 03/18/19

Acenaphthene	1.28	0.17	mg/Kg wet	1.67		77.1	40-140	2.98	30	
Acenaphthylene	1.30	0.17	mg/Kg wet	1.67		77.9	40-140	5.13	30	
Acetophenone	1.18	0.34	mg/Kg wet	1.67		70.8	40-140	5.33	30	
<b>Aniline</b>	0.461	0.34	mg/Kg wet	1.67		27.7 *	40-140	1.90	30	L-04, V-34
Anthracene	1.36	0.17	mg/Kg wet	1.67		81.4	40-140	1.17	30	
Benzo(a)anthracene	1.29	0.17	mg/Kg wet	1.67		77.7	40-140	2.22	30	
Benzo(a)pyrene	1.42	0.17	mg/Kg wet	1.67		85.1	40-140	2.32	30	
Benzo(b)fluoranthene	1.34	0.17	mg/Kg wet	1.67		80.1	40-140	2.66	30	
Benzo(g,h,i)perylene	1.63	0.17	mg/Kg wet	1.67		97.9	40-140	0.874	30	
Benzo(k)fluoranthene	1.38	0.17	mg/Kg wet	1.67		82.9	40-140	1.48	30	
Bis(2-chloroethoxy)methane	1.40	0.34	mg/Kg wet	1.67		84.0	40-140	3.07	30	
Bis(2-chloroethyl)ether	1.21	0.34	mg/Kg wet	1.67		72.5	40-140	4.63	30	
Bis(2-chloroisopropyl)ether	1.33	0.34	mg/Kg wet	1.67		79.8	40-140	7.52	30	
Bis(2-Ethylhexyl)phthalate	1.36	0.34	mg/Kg wet	1.67		81.5	40-140	1.22	30	
4-Bromophenylphenylether	1.30	0.34	mg/Kg wet	1.67		78.1	40-140	4.97	30	
Butylbenzylphthalate	1.42	0.34	mg/Kg wet	1.67		85.3	40-140	1.05	30	
4-Chloroaniline	0.583	0.66	mg/Kg wet	1.67		35.0	15-140	2.49	30	V-34 †
2-Chloronaphthalene	1.16	0.34	mg/Kg wet	1.67		69.6	40-140	2.41	30	
2-Chlorophenol	1.23	0.34	mg/Kg wet	1.67		73.6	30-130	7.06	30	
Chrysene	1.34	0.17	mg/Kg wet	1.67		80.2	40-140	3.19	30	
Dibenz(a,h)anthracene	1.49	0.17	mg/Kg wet	1.67		89.4	40-140	0.380	30	
Dibenzofuran	1.33	0.34	mg/Kg wet	1.67		79.8	40-140	1.34	30	
Di-n-butylphthalate	1.37	0.34	mg/Kg wet	1.67		82.3	40-140	0.952	30	
1,2-Dichlorobenzene	1.05	0.34	mg/Kg wet	1.67		62.8	40-140	6.85	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 B225813 - SW-846 3546

LCS Dup (B225813-BSD1)

Prepared: 03/15/19 Analyzed: 03/18/19

1,3-Dichlorobenzene	0.994	0.34	mg/Kg wet	1.67		59.7	40-140	7.26	30	
1,4-Dichlorobenzene	0.999	0.34	mg/Kg wet	1.67		59.9	40-140	4.82	30	
3,3-Dichlorobenzidine	0.691	0.17	mg/Kg wet	1.67		41.5	40-140	2.54	30	V-34
2,4-Dichlorophenol	1.22	0.34	mg/Kg wet	1.67		73.2	30-130	2.57	30	
Diethylphthalate	1.41	0.34	mg/Kg wet	1.67		84.5	40-140	3.30	30	
2,4-Dimethylphenol	1.25	0.34	mg/Kg wet	1.67		75.1	30-130	0.240	30	
Dimethylphthalate	1.39	0.34	mg/Kg wet	1.67		83.1	40-140	2.48	30	
2,4-Dinitrophenol	1.06	0.66	mg/Kg wet	1.67		63.8	15-140	8.09	30	†
2,4-Dinitrotoluene	1.39	0.34	mg/Kg wet	1.67		83.7	40-140	2.13	30	
2,6-Dinitrotoluene	1.40	0.34	mg/Kg wet	1.67		84.1	40-140	1.24	30	
Di-n-octylphthalate	1.30	0.34	mg/Kg wet	1.67		78.0	40-140	0.333	30	
1,2-Diphenylhydrazine/Azobenzene	1.29	0.34	mg/Kg wet	1.67		77.3	40-140	4.62	30	
Fluoranthene	1.37	0.17	mg/Kg wet	1.67		82.0	40-140	0.808	30	
Fluorene	1.35	0.17	mg/Kg wet	1.67		81.1	40-140	1.84	30	
Hexachlorobenzene	1.29	0.34	mg/Kg wet	1.67		77.4	40-140	2.42	30	
Hexachlorobutadiene	1.09	0.34	mg/Kg wet	1.67		65.3	40-140	6.25	30	
Hexachloroethane	1.04	0.34	mg/Kg wet	1.67		62.5	40-140	6.23	30	
Indeno(1,2,3-cd)pyrene	1.51	0.17	mg/Kg wet	1.67		90.6	40-140	1.08	30	
Isophorone	1.27	0.34	mg/Kg wet	1.67		76.4	40-140	3.68	30	
2-Methylnaphthalene	1.26	0.17	mg/Kg wet	1.67		75.7	40-140	1.33	30	
2-Methylphenol	1.02	0.34	mg/Kg wet	1.67		61.2	30-130	1.51	30	
3/4-Methylphenol	1.19	0.34	mg/Kg wet	1.67		71.5	30-130	2.12	30	
Naphthalene	1.17	0.17	mg/Kg wet	1.67		70.0	40-140	4.11	30	
Nitrobenzene	1.17	0.34	mg/Kg wet	1.67		69.9	40-140	3.55	30	
2-Nitrophenol	1.27	0.34	mg/Kg wet	1.67		76.2	30-130	5.50	30	
4-Nitrophenol	1.47	0.66	mg/Kg wet	1.67		88.4	15-140	1.50	30	†
Pentachlorophenol	1.34	0.34	mg/Kg wet	1.67		80.6	30-130	0.963	30	
Phenanthrene	1.34	0.17	mg/Kg wet	1.67		80.5	40-140	2.31	30	
Phenol	1.22	0.34	mg/Kg wet	1.67		73.4	15-140	4.23	30	†
Pyrene	1.37	0.17	mg/Kg wet	1.67		82.3	40-140	4.19	30	
Pyridine	0.831	0.34	mg/Kg wet	1.67		49.8	30-140	6.68	30	†
1,2,4-Trichlorobenzene	1.15	0.34	mg/Kg wet	1.67		68.8	40-140	5.01	30	
2,4,5-Trichlorophenol	1.32	0.34	mg/Kg wet	1.67		79.2	30-130	1.99	30	
2,4,6-Trichlorophenol	1.41	0.34	mg/Kg wet	1.67		84.7	30-130	1.52	30	
Surrogate: 2-Fluorophenol	4.69		mg/Kg wet	6.67		70.3	30-130			
Surrogate: Phenol-d6	4.89		mg/Kg wet	6.67		73.3	30-130			
Surrogate: Nitrobenzene-d5	2.46		mg/Kg wet	3.33		73.8	30-130			
Surrogate: 2-Fluorobiphenyl	2.67		mg/Kg wet	3.33		80.0	30-130			
Surrogate: 2,4,6-Tribromophenol	6.10		mg/Kg wet	6.67		91.5	30-130			
Surrogate: p-Terphenyl-d14	2.96		mg/Kg wet	3.33		88.8	30-130			

Matrix Spike (B225813-MS1)

Source: 19C0480-01

Prepared: 03/15/19 Analyzed: 03/20/19

Acenaphthene	1.65	1.9	mg/Kg dry	1.83	ND	89.8	40-140			
Acenaphthylene	1.96	1.9	mg/Kg dry	1.83	ND	107	40-140			
Acetophenone	1.54	3.7	mg/Kg dry	1.83	ND	84.0	40-140			
Aniline	0.682	3.7	mg/Kg dry	1.83	ND	37.2 *	40-140			L-04, MS-09, V-34
Anthracene	2.09	1.9	mg/Kg dry	1.83	ND	114	40-140			
Benzo(a)anthracene	3.26	1.9	mg/Kg dry	1.83	2.29	52.8	40-140			
Benzo(a)pyrene	3.08	1.9	mg/Kg dry	1.83	2.08	54.4	40-140			
Benzo(b)fluoranthene	3.18	1.9	mg/Kg dry	1.83	2.40	43.0	40-140			
Benzo(g,h,i)perylene	2.10	1.9	mg/Kg dry	1.83	ND	115	40-140			
Benzo(k)fluoranthene	2.38	1.9	mg/Kg dry	1.83	ND	130	40-140			



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
<b>Batch B225813 - SW-846 3546</b>										
<b>Matrix Spike (B225813-MS1)</b>	<b>Source: 19C0480-01</b>			Prepared: 03/15/19 Analyzed: 03/20/19						
Bis(2-chloroethoxy)methane	2.01	3.7	mg/Kg dry	1.83	ND	110	40-140			
Bis(2-chloroethyl)ether	1.74	3.7	mg/Kg dry	1.83	ND	95.0	40-140			
Bis(2-chloroisopropyl)ether	1.93	3.7	mg/Kg dry	1.83	ND	105	40-140			
Bis(2-Ethylhexyl)phthalate	1.95	3.7	mg/Kg dry	1.83	ND	106	40-140			
4-Bromophenylphenylether	1.80	3.7	mg/Kg dry	1.83	ND	98.4	40-140			
Butylbenzylphthalate	1.90	3.7	mg/Kg dry	1.83	ND	104	40-140			
4-Chloroaniline	0.910	7.3	mg/Kg dry	1.83	ND	49.6	40-140			V-34
2-Chloronaphthalene	1.45	3.7	mg/Kg dry	1.83	ND	78.8	40-140			
2-Chlorophenol	1.81	3.7	mg/Kg dry	1.83	ND	98.6	30-130			
Chrysene	3.15	1.9	mg/Kg dry	1.83	2.18	52.6	40-140			
Dibenz(a,h)anthracene	1.60	1.9	mg/Kg dry	1.83	ND	87.0	40-140			
Dibenzofuran	1.86	3.7	mg/Kg dry	1.83	ND	101	40-140			
Di-n-butylphthalate	1.80	3.7	mg/Kg dry	1.83	ND	98.0	40-140			
1,2-Dichlorobenzene	1.50	3.7	mg/Kg dry	1.83	ND	81.8	40-140			
1,3-Dichlorobenzene	1.54	3.7	mg/Kg dry	1.83	ND	84.0	40-140			
1,4-Dichlorobenzene	1.49	3.7	mg/Kg dry	1.83	ND	81.0	40-140			
3,3-Dichlorobenzidine	1.34	1.9	mg/Kg dry	1.83	ND	73.2	40-140			
2,4-Dichlorophenol	1.83	3.7	mg/Kg dry	1.83	ND	99.8	30-130			
Diethylphthalate	1.80	3.7	mg/Kg dry	1.83	ND	98.0	40-140			
2,4-Dimethylphenol	1.87	3.7	mg/Kg dry	1.83	ND	102	30-130			
Dimethylphthalate	1.75	3.7	mg/Kg dry	1.83	ND	95.6	40-140			
<b>2,4-Dinitrophenol</b>	ND	7.3	mg/Kg dry	1.83	ND	*	30-130			MS-09
2,4-Dinitrotoluene	1.68	3.7	mg/Kg dry	1.83	ND	91.8	40-140			
2,6-Dinitrotoluene	1.75	3.7	mg/Kg dry	1.83	ND	95.2	40-140			
Di-n-octylphthalate	2.08	3.7	mg/Kg dry	1.83	ND	113	40-140			
1,2-Diphenylhydrazine/Azobenzene	1.63	3.7	mg/Kg dry	1.83	ND	89.0	40-140			
<b>Fluoranthene</b>	4.36	1.9	mg/Kg dry	1.83	4.82	-24.6	*	40-140		MS-09
Fluorene	1.92	1.9	mg/Kg dry	1.83	ND	105	40-140			
Hexachlorobenzene	1.68	3.7	mg/Kg dry	1.83	ND	91.4	40-140			
Hexachlorobutadiene	1.60	3.7	mg/Kg dry	1.83	ND	87.4	40-140			
Hexachloroethane	1.17	3.7	mg/Kg dry	1.83	ND	64.0	40-140			
Indeno(1,2,3-cd)pyrene	2.18	1.9	mg/Kg dry	1.83	ND	119	40-140			
Isophorone	1.70	3.7	mg/Kg dry	1.83	ND	92.8	40-140			
2-Methylnaphthalene	1.86	1.9	mg/Kg dry	1.83	ND	101	40-140			
2-Methylphenol	1.75	3.7	mg/Kg dry	1.83	ND	95.6	30-130			
3/4-Methylphenol	1.61	3.7	mg/Kg dry	1.83	ND	88.0	30-130			
Naphthalene	1.77	1.9	mg/Kg dry	1.83	ND	96.4	40-140			
Nitrobenzene	1.60	3.7	mg/Kg dry	1.83	ND	87.2	40-140			
2-Nitrophenol	1.71	3.7	mg/Kg dry	1.83	ND	93.0	30-130			
4-Nitrophenol	2.09	7.3	mg/Kg dry	1.83	ND	114	30-130			
Pentachlorophenol	0.741	3.7	mg/Kg dry	1.83	ND	40.4	30-130			
<b>Phenanthrene</b>	3.79	1.9	mg/Kg dry	1.83	4.46	-36.6	*	40-140		MS-09
Phenol	1.76	3.7	mg/Kg dry	1.83	ND	96.2	30-130			
<b>Pyrene</b>	4.80	1.9	mg/Kg dry	1.83	5.01	-11.4	*	40-140		MS-09
1,2,4-Trichlorobenzene	1.68	3.7	mg/Kg dry	1.83	ND	91.6	40-140			
2,4,5-Trichlorophenol	1.71	3.7	mg/Kg dry	1.83	ND	93.0	30-130			
2,4,6-Trichlorophenol	1.77	3.7	mg/Kg dry	1.83	ND	96.6	30-130			
Surrogate: 2-Fluorophenol	6.86		mg/Kg dry	7.34		93.5	30-130			
Surrogate: Phenol-d6	7.15		mg/Kg dry	7.34		97.5	30-130			
Surrogate: Nitrobenzene-d5	3.40		mg/Kg dry	3.67		92.8	30-130			
Surrogate: 2-Fluorobiphenyl	3.67		mg/Kg dry	3.67		100	30-130			
Surrogate: 2,4,6-Tribromophenol	7.77		mg/Kg dry	7.34		106	30-130			

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
<b>Batch B225813 - SW-846 3546</b>										
<b>Matrix Spike (B225813-MS1) Source: 19C0480-01 Prepared: 03/15/19 Analyzed: 03/20/19</b>										
Surrogate: p-Terphenyl-d14	4.03		mg/Kg dry	3.67		110	30-130			
<b>Matrix Spike Dup (B225813-MSD1) Source: 19C0480-01 Prepared: 03/15/19 Analyzed: 03/20/19</b>										
Acenaphthene	1.67	1.9	mg/Kg dry	1.83	ND	91.2	40-140	1.55	30	
Acenaphthylene	1.98	1.9	mg/Kg dry	1.83	ND	108	40-140	0.930	30	
Acetophenone	1.58	3.7	mg/Kg dry	1.83	ND	86.2	40-140	2.59	30	
<b>Aniline</b>	0.682	3.7	mg/Kg dry	1.83	ND	<b>37.2</b>	* 40-140		30	L-04, MS-09, V-34
Anthracene	2.10	1.9	mg/Kg dry	1.83	ND	114	40-140	0.350	30	
Benzo(a)anthracene	3.17	1.9	mg/Kg dry	1.83	2.29	48.0	40-140	2.74	30	
Benzo(a)pyrene	3.10	1.9	mg/Kg dry	1.83	2.08	55.8	40-140	0.831	30	
Benzo(b)fluoranthene	3.30	1.9	mg/Kg dry	1.83	2.40	49.2	40-140	3.51	30	
Benzo(g,h,i)perylene	2.40	1.9	mg/Kg dry	1.83	ND	131	40-140	13.4	30	
Benzo(k)fluoranthene	2.52	1.9	mg/Kg dry	1.83	ND	138	40-140	5.99	30	
Bis(2-chloroethoxy)methane	1.99	3.7	mg/Kg dry	1.83	ND	108	40-140	1.10	30	
Bis(2-chloroethyl)ether	1.81	3.7	mg/Kg dry	1.83	ND	98.6	40-140		30	
Bis(2-chloroisopropyl)ether	2.05	3.7	mg/Kg dry	1.83	ND	112	40-140		30	
Bis(2-Ethylhexyl)phthalate	2.02	3.7	mg/Kg dry	1.83	ND	110	40-140	3.33	30	
4-Bromophenylphenylether	1.73	3.7	mg/Kg dry	1.83	ND	94.6	40-140	3.94	30	
Butylbenzylphthalate	2.03	3.7	mg/Kg dry	1.83	ND	111	40-140	6.72	30	
4-Chloroaniline	0.888	7.3	mg/Kg dry	1.83	ND	48.4	40-140		30	V-34
2-Chloronaphthalene	1.60	3.7	mg/Kg dry	1.83	ND	87.2	40-140	10.1	30	
2-Chlorophenol	1.80	3.7	mg/Kg dry	1.83	ND	98.2	30-130	0.407	30	
Chrysene	3.11	1.9	mg/Kg dry	1.83	2.18	50.8	40-140	1.05	30	
Dibenz(a,h)anthracene	1.58	1.9	mg/Kg dry	1.83	ND	86.0	40-140	1.16	30	
Dibenzofuran	1.78	3.7	mg/Kg dry	1.83	ND	97.2	40-140	4.03	30	
Di-n-butylphthalate	1.81	3.7	mg/Kg dry	1.83	ND	98.6	40-140	0.610	30	
1,2-Dichlorobenzene	1.53	3.7	mg/Kg dry	1.83	ND	83.6	40-140	2.18	30	
1,3-Dichlorobenzene	1.49	3.7	mg/Kg dry	1.83	ND	81.2	40-140	3.39	30	
1,4-Dichlorobenzene	1.51	3.7	mg/Kg dry	1.83	ND	82.2	40-140	1.47	30	
3,3-Dichlorobenzidine	1.54	1.9	mg/Kg dry	1.83	ND	83.8	40-140		30	
2,4-Dichlorophenol	1.80	3.7	mg/Kg dry	1.83	ND	98.2	30-130	1.62	30	
Diethylphthalate	1.76	3.7	mg/Kg dry	1.83	ND	95.8	40-140	2.27	30	
2,4-Dimethylphenol	1.80	3.7	mg/Kg dry	1.83	ND	98.2	30-130	3.80	30	
Dimethylphthalate	1.83	3.7	mg/Kg dry	1.83	ND	100	40-140	4.50	30	
<b>2,4-Dinitrophenol</b>	ND	7.3	mg/Kg dry	1.83	ND	*	30-130		30	MS-09
2,4-Dinitrotoluene	1.56	3.7	mg/Kg dry	1.83	ND	85.0	40-140		30	
2,6-Dinitrotoluene	1.78	3.7	mg/Kg dry	1.83	ND	96.8	40-140		30	
Di-n-octylphthalate	2.20	3.7	mg/Kg dry	1.83	ND	120	40-140	6.00	30	
1,2-Diphenylhydrazine/Azobenzene	1.57	3.7	mg/Kg dry	1.83	ND	85.6	40-140	3.89	30	
<b>Fluoranthene</b>	4.29	1.9	mg/Kg dry	1.83	4.82	<b>-28.8</b>	* 40-140	1.78	30	MS-09
Fluorene	1.85	1.9	mg/Kg dry	1.83	ND	101	40-140	4.09	30	
Hexachlorobenzene	1.66	3.7	mg/Kg dry	1.83	ND	90.4	40-140	1.10	30	
Hexachlorobutadiene	1.71	3.7	mg/Kg dry	1.83	ND	93.4	40-140	6.64	30	
Hexachloroethane	1.14	3.7	mg/Kg dry	1.83	ND	62.0	40-140		30	
Indeno(1,2,3-cd)pyrene	2.44	1.9	mg/Kg dry	1.83	ND	133	40-140	11.4	30	
Isophorone	1.73	3.7	mg/Kg dry	1.83	ND	94.4	40-140	1.71	30	
2-Methylnaphthalene	1.85	1.9	mg/Kg dry	1.83	ND	101	40-140	0.593	30	
2-Methylphenol	1.78	3.7	mg/Kg dry	1.83	ND	97.2	30-130	1.66	30	
3/4-Methylphenol	1.61	3.7	mg/Kg dry	1.83	ND	87.6	30-130	0.456	30	
Naphthalene	1.77	1.9	mg/Kg dry	1.83	ND	96.4	40-140	0.00	30	
Nitrobenzene	1.60	3.7	mg/Kg dry	1.83	ND	87.4	40-140	0.229	30	
2-Nitrophenol	1.69	3.7	mg/Kg dry	1.83	ND	92.4	30-130	0.647	30	

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

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 B225813 - SW-846 3546

Matrix Spike Dup (B225813-MSD1)

Source: 19C0480-01

Prepared: 03/15/19 Analyzed: 03/20/19

4-Nitrophenol	2.01	7.3	mg/Kg dry	1.83	ND	110	30-130		30	
Pentachlorophenol	0.829	3.7	mg/Kg dry	1.83	ND	45.2	30-130		30	
<b>Phenanthrene</b>	3.83	1.9	mg/Kg dry	1.83	4.46	-34.4 *	40-140	1.06	30	MS-09
Phenol	1.81	3.7	mg/Kg dry	1.83	ND	98.8	30-130	2.67	30	
<b>Pyrene</b>	4.92	1.9	mg/Kg dry	1.83	5.01	-5.20 *	40-140	2.34	30	MS-09
1,2,4-Trichlorobenzene	1.60	3.7	mg/Kg dry	1.83	ND	87.4	40-140	4.69	30	
2,4,5-Trichlorophenol	1.76	3.7	mg/Kg dry	1.83	ND	95.8	30-130	2.97	30	
2,4,6-Trichlorophenol	1.77	3.7	mg/Kg dry	1.83	ND	96.4	30-130	0.207	30	
Surrogate: 2-Fluorophenol	7.03		mg/Kg dry	7.34		95.8	30-130			
Surrogate: Phenol-d6	7.19		mg/Kg dry	7.34		98.0	30-130			
Surrogate: Nitrobenzene-d5	3.40		mg/Kg dry	3.67		92.6	30-130			
Surrogate: 2-Fluorobiphenyl	3.72		mg/Kg dry	3.67		102	30-130			
Surrogate: 2,4,6-Tribromophenol	7.42		mg/Kg dry	7.34		101	30-130			
Surrogate: p-Terphenyl-d14	4.06		mg/Kg dry	3.67		111	30-130			

Batch B225814 - SW-846 3546

Blank (B225814-BLK1)

Prepared: 03/15/19 Analyzed: 03/16/19

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							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							
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							
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							
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							
2,4-Dinitrophenol	ND	0.66	mg/Kg wet							
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							

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 B225814 - SW-846 3546

Blank (B225814-BLK1)

Prepared: 03/15/19 Analyzed: 03/16/19

1,2-Diphenylhydrazine/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							
Phenol	ND	0.34	mg/Kg wet							
Pyrene	ND	0.17	mg/Kg wet							
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	3.75		mg/Kg wet	6.67		56.3	30-130			
Surrogate: Phenol-d6	3.88		mg/Kg wet	6.67		58.2	30-130			
Surrogate: Nitrobenzene-d5	1.92		mg/Kg wet	3.33		57.6	30-130			
Surrogate: 2-Fluorobiphenyl	1.99		mg/Kg wet	3.33		59.6	30-130			
Surrogate: 2,4,6-Tribromophenol	4.20		mg/Kg wet	6.67		62.9	30-130			
Surrogate: p-Terphenyl-d14	2.39		mg/Kg wet	3.33		71.7	30-130			

LCS (B225814-BS1)

Prepared: 03/15/19 Analyzed: 03/16/19

Acenaphthene	1.03	0.17	mg/Kg wet	1.67		61.7	40-140			
Acenaphthylene	1.04	0.17	mg/Kg wet	1.67		62.2	40-140			
Acetophenone	1.00	0.34	mg/Kg wet	1.67		60.3	40-140			
Aniline	0.761	0.34	mg/Kg wet	1.67		45.7	40-140			V-34
Anthracene	1.14	0.17	mg/Kg wet	1.67		68.7	40-140			
Benzo(a)anthracene	1.10	0.17	mg/Kg wet	1.67		66.1	40-140			
Benzo(a)pyrene	1.18	0.17	mg/Kg wet	1.67		70.8	40-140			
Benzo(b)fluoranthene	1.13	0.17	mg/Kg wet	1.67		67.7	40-140			
Benzo(g,h,i)perylene	1.29	0.17	mg/Kg wet	1.67		77.4	40-140			
Benzo(k)fluoranthene	1.17	0.17	mg/Kg wet	1.67		70.2	40-140			
Bis(2-chloroethoxy)methane	1.24	0.34	mg/Kg wet	1.67		74.3	40-140			
Bis(2-chloroethyl)ether	1.08	0.34	mg/Kg wet	1.67		65.1	40-140			
Bis(2-chloroisopropyl)ether	1.23	0.34	mg/Kg wet	1.67		73.8	40-140			
Bis(2-Ethylhexyl)phthalate	1.24	0.34	mg/Kg wet	1.67		74.1	40-140			
4-Bromophenylphenylether	1.13	0.34	mg/Kg wet	1.67		67.7	40-140			
Butylbenzylphthalate	1.27	0.34	mg/Kg wet	1.67		76.5	40-140			
4-Chloroaniline	0.859	0.66	mg/Kg wet	1.67		51.6	15-140			V-34 †
2-Chloronaphthalene	0.933	0.34	mg/Kg wet	1.67		56.0	40-140			
2-Chlorophenol	1.04	0.34	mg/Kg wet	1.67		62.2	30-130			
Chrysene	1.13	0.17	mg/Kg wet	1.67		68.0	40-140			
Dibenz(a,h)anthracene	1.21	0.17	mg/Kg wet	1.67		72.4	40-140			
Dibenzofuran	1.08	0.34	mg/Kg wet	1.67		65.0	40-140			

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
<b>Batch B225814 - SW-846 3546</b>										
<b>LCS (B225814-BS1)</b>										
					Prepared: 03/15/19 Analyzed: 03/16/19					
Di-n-butylphthalate	1.18	0.34	mg/Kg wet	1.67		70.7	40-140			
1,2-Dichlorobenzene	0.870	0.34	mg/Kg wet	1.67		52.2	40-140			
1,3-Dichlorobenzene	0.832	0.34	mg/Kg wet	1.67		49.9	40-140			
1,4-Dichlorobenzene	0.845	0.34	mg/Kg wet	1.67		50.7	40-140			
3,3-Dichlorobenzidine	0.996	0.17	mg/Kg wet	1.67		59.7	40-140			V-34
2,4-Dichlorophenol	1.01	0.34	mg/Kg wet	1.67		60.5	30-130			
Diethylphthalate	1.14	0.34	mg/Kg wet	1.67		68.6	40-140			
2,4-Dimethylphenol	1.11	0.34	mg/Kg wet	1.67		66.6	30-130			
Dimethylphthalate	1.12	0.34	mg/Kg wet	1.67		67.5	40-140			
2,4-Dinitrophenol	0.773	0.66	mg/Kg wet	1.67		46.4	15-140			†
2,4-Dinitrotoluene	1.10	0.34	mg/Kg wet	1.67		65.9	40-140			
2,6-Dinitrotoluene	1.14	0.34	mg/Kg wet	1.67		68.2	40-140			
Di-n-octylphthalate	1.18	0.34	mg/Kg wet	1.67		71.0	40-140			
1,2-Diphenylhydrazine/Azobenzene	1.24	0.34	mg/Kg wet	1.67		74.6	40-140			
Fluoranthene	1.10	0.17	mg/Kg wet	1.67		65.9	40-140			
Fluorene	1.08	0.17	mg/Kg wet	1.67		65.1	40-140			
Hexachlorobenzene	1.10	0.34	mg/Kg wet	1.67		66.0	40-140			
Hexachlorobutadiene	0.898	0.34	mg/Kg wet	1.67		53.9	40-140			
Hexachloroethane	0.889	0.34	mg/Kg wet	1.67		53.3	40-140			
Indeno(1,2,3-cd)pyrene	1.22	0.17	mg/Kg wet	1.67		73.1	40-140			
Isophorone	1.09	0.34	mg/Kg wet	1.67		65.3	40-140			
2-Methylnaphthalene	1.04	0.17	mg/Kg wet	1.67		62.4	40-140			
2-Methylphenol	0.911	0.34	mg/Kg wet	1.67		54.6	30-130			
3/4-Methylphenol	1.02	0.34	mg/Kg wet	1.67		61.4	30-130			
Naphthalene	0.986	0.17	mg/Kg wet	1.67		59.2	40-140			
Nitrobenzene	0.998	0.34	mg/Kg wet	1.67		59.9	40-140			
2-Nitrophenol	1.03	0.34	mg/Kg wet	1.67		61.7	30-130			
4-Nitrophenol	1.12	0.66	mg/Kg wet	1.67		67.0	15-140			†
Pentachlorophenol	1.07	0.34	mg/Kg wet	1.67		64.0	30-130			
Phenanthrene	1.14	0.17	mg/Kg wet	1.67		68.5	40-140			
Phenol	1.05	0.34	mg/Kg wet	1.67		62.9	15-140			†
Pyrene	1.21	0.17	mg/Kg wet	1.67		72.9	40-140			
1,2,4-Trichlorobenzene	0.938	0.34	mg/Kg wet	1.67		56.3	40-140			
2,4,5-Trichlorophenol	1.09	0.34	mg/Kg wet	1.67		65.7	30-130			
2,4,6-Trichlorophenol	1.13	0.34	mg/Kg wet	1.67		67.6	30-130			
Surrogate: 2-Fluorophenol	3.97		mg/Kg wet	6.67		59.6	30-130			
Surrogate: Phenol-d6	4.09		mg/Kg wet	6.67		61.4	30-130			
Surrogate: Nitrobenzene-d5	2.06		mg/Kg wet	3.33		61.9	30-130			
Surrogate: 2-Fluorobiphenyl	2.19		mg/Kg wet	3.33		65.6	30-130			
Surrogate: 2,4,6-Tribromophenol	4.51		mg/Kg wet	6.67		67.6	30-130			
Surrogate: p-Terphenyl-d14	2.53		mg/Kg wet	3.33		75.8	30-130			
<b>LCS Dup (B225814-BS1)</b>										
					Prepared: 03/15/19 Analyzed: 03/16/19					
Acenaphthene	1.05	0.17	mg/Kg wet	1.67		62.8	40-140	1.77	30	
Acenaphthylene	1.06	0.17	mg/Kg wet	1.67		63.8	40-140	2.60	30	
Acetophenone	1.01	0.34	mg/Kg wet	1.67		60.8	40-140	0.826	30	
Aniline	0.719	0.34	mg/Kg wet	1.67		43.2	40-140	5.67	30	V-34
Anthracene	1.18	0.17	mg/Kg wet	1.67		70.6	40-140	2.81	30	
Benzo(a)anthracene	1.11	0.17	mg/Kg wet	1.67		66.7	40-140	0.964	30	
Benzo(a)pyrene	1.21	0.17	mg/Kg wet	1.67		72.5	40-140	2.37	30	
Benzo(b)fluoranthene	1.15	0.17	mg/Kg wet	1.67		69.0	40-140	1.81	30	
Benzo(g,h,i)perylene	1.34	0.17	mg/Kg wet	1.67		80.6	40-140	3.95	30	

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
<b>Batch B225814 - SW-846 3546</b>										
<b>LCS Dup (B225814-BSD1)</b>										
					Prepared: 03/15/19 Analyzed: 03/16/19					
Benzo(k)fluoranthene	1.17	0.17	mg/Kg wet	1.67		70.1	40-140	0.228	30	
Bis(2-chloroethoxy)methane	1.24	0.34	mg/Kg wet	1.67		74.2	40-140	0.162	30	
Bis(2-chloroethyl)ether	1.08	0.34	mg/Kg wet	1.67		65.0	40-140	0.123	30	
Bis(2-chloroisopropyl)ether	1.23	0.34	mg/Kg wet	1.67		73.9	40-140	0.162	30	
Bis(2-Ethylhexyl)phthalate	1.26	0.34	mg/Kg wet	1.67		75.4	40-140	1.71	30	
4-Bromophenylphenylether	1.15	0.34	mg/Kg wet	1.67		68.8	40-140	1.61	30	
Butylbenzylphthalate	1.29	0.34	mg/Kg wet	1.67		77.6	40-140	1.45	30	
4-Chloroaniline	0.851	0.66	mg/Kg wet	1.67		51.0	15-140	1.01	30	V-34 †
2-Chloronaphthalene	0.951	0.34	mg/Kg wet	1.67		57.0	40-140	1.88	30	
2-Chlorophenol	1.05	0.34	mg/Kg wet	1.67		63.0	30-130	1.18	30	
Chrysene	1.16	0.17	mg/Kg wet	1.67		69.4	40-140	1.95	30	
Dibenz(a,h)anthracene	1.23	0.17	mg/Kg wet	1.67		74.0	40-140	2.19	30	
Dibenzofuran	1.10	0.34	mg/Kg wet	1.67		66.3	40-140	2.04	30	
Di-n-butylphthalate	1.21	0.34	mg/Kg wet	1.67		72.6	40-140	2.54	30	
1,2-Dichlorobenzene	0.881	0.34	mg/Kg wet	1.67		52.9	40-140	1.33	30	
1,3-Dichlorobenzene	0.849	0.34	mg/Kg wet	1.67		51.0	40-140	2.10	30	
1,4-Dichlorobenzene	0.851	0.34	mg/Kg wet	1.67		51.1	40-140	0.707	30	
3,3-Dichlorobenzidine	0.964	0.17	mg/Kg wet	1.67		57.8	40-140	3.23	30	V-34
2,4-Dichlorophenol	1.01	0.34	mg/Kg wet	1.67		60.9	30-130	0.593	30	
Diethylphthalate	1.18	0.34	mg/Kg wet	1.67		70.8	40-140	3.16	30	
2,4-Dimethylphenol	1.12	0.34	mg/Kg wet	1.67		67.4	30-130	1.16	30	
Dimethylphthalate	1.16	0.34	mg/Kg wet	1.67		69.9	40-140	3.47	30	
2,4-Dinitrophenol	0.846	0.66	mg/Kg wet	1.67		50.8	15-140	8.97	30	†
2,4-Dinitrotoluene	1.12	0.34	mg/Kg wet	1.67		67.4	40-140	2.31	30	
2,6-Dinitrotoluene	1.16	0.34	mg/Kg wet	1.67		69.7	40-140	2.15	30	
Di-n-octylphthalate	1.20	0.34	mg/Kg wet	1.67		71.9	40-140	1.18	30	
1,2-Diphenylhydrazine/Azobenzene	1.23	0.34	mg/Kg wet	1.67		73.8	40-140	1.16	30	
Fluoranthene	1.12	0.17	mg/Kg wet	1.67		67.5	40-140	2.40	30	
Fluorene	1.12	0.17	mg/Kg wet	1.67		67.2	40-140	3.17	30	
Hexachlorobenzene	1.10	0.34	mg/Kg wet	1.67		66.1	40-140	0.273	30	
Hexachlorobutadiene	0.904	0.34	mg/Kg wet	1.67		54.3	40-140	0.703	30	
Hexachloroethane	0.903	0.34	mg/Kg wet	1.67		54.2	40-140	1.60	30	
Indeno(1,2,3-cd)pyrene	1.27	0.17	mg/Kg wet	1.67		76.4	40-140	4.50	30	
Isophorone	1.10	0.34	mg/Kg wet	1.67		66.2	40-140	1.31	30	
2-Methylnaphthalene	1.06	0.17	mg/Kg wet	1.67		63.5	40-140	1.75	30	
2-Methylphenol	0.915	0.34	mg/Kg wet	1.67		54.9	30-130	0.511	30	
3/4-Methylphenol	1.02	0.34	mg/Kg wet	1.67		61.4	30-130	0.0325	30	
Naphthalene	0.990	0.17	mg/Kg wet	1.67		59.4	40-140	0.371	30	
Nitrobenzene	1.01	0.34	mg/Kg wet	1.67		60.7	40-140	1.33	30	
2-Nitrophenol	1.07	0.34	mg/Kg wet	1.67		64.1	30-130	3.78	30	
4-Nitrophenol	1.18	0.66	mg/Kg wet	1.67		70.6	15-140	5.20	30	†
Pentachlorophenol	1.14	0.34	mg/Kg wet	1.67		68.4	30-130	6.58	30	
Phenanthrene	1.16	0.17	mg/Kg wet	1.67		69.7	40-140	1.77	30	
Phenol	1.06	0.34	mg/Kg wet	1.67		63.7	15-140	1.17	30	†
Pyrene	1.23	0.17	mg/Kg wet	1.67		73.6	40-140	1.06	30	
1,2,4-Trichlorobenzene	0.959	0.34	mg/Kg wet	1.67		57.5	40-140	2.14	30	
2,4,5-Trichlorophenol	1.10	0.34	mg/Kg wet	1.67		65.9	30-130	0.274	30	
2,4,6-Trichlorophenol	1.16	0.34	mg/Kg wet	1.67		69.9	30-130	3.26	30	
Surrogate: 2-Fluorophenol	4.00		mg/Kg wet	6.67		59.9	30-130			
Surrogate: Phenol-d6	4.14		mg/Kg wet	6.67		62.0	30-130			
Surrogate: Nitrobenzene-d5	2.09		mg/Kg wet	3.33		62.7	30-130			
Surrogate: 2-Fluorobiphenyl	2.21		mg/Kg wet	3.33		66.2	30-130			

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
<b>Batch B225814 - SW-846 3546</b>										
<b>LCS Dup (B225814-BSD1)</b>										
					Prepared: 03/15/19 Analyzed: 03/16/19					
Surrogate: 2,4,6-Tribromophenol	4.71		mg/Kg wet	6.67		70.6	30-130			
Surrogate: p-Terphenyl-d14	2.56		mg/Kg wet	3.33		76.9	30-130			
<b>Matrix Spike (B225814-MS1)</b>										
					Source: 19C0480-21 Prepared: 03/15/19 Analyzed: 03/18/19					
Acenaphthene	0.902	0.91	mg/Kg dry	1.78	ND	50.6	40-140			
Acenaphthylene	1.02	0.91	mg/Kg dry	1.78	ND	57.1	40-140			
Acetophenone	0.891	1.8	mg/Kg dry	1.78	ND	50.0	40-140			
Aniline	0.257	1.8	mg/Kg dry	1.78	ND	14.4 *	40-140			MS-09, V-34
Anthracene	0.997	0.91	mg/Kg dry	1.78	ND	55.9	40-140			
Benzo(a)anthracene	1.34	0.91	mg/Kg dry	1.78	1.32	0.885 *	40-140			MS-09
Benzo(a)pyrene	1.45	0.91	mg/Kg dry	1.78	1.41	2.40 *	40-140			MS-09
Benzo(b)fluoranthene	1.47	0.91	mg/Kg dry	1.78	1.57	-5.64 *	40-140			MS-09
Benzo(g,h,i)perylene	0.909	0.91	mg/Kg dry	1.78	0.979	-3.90 *	40-140			MS-09
Benzo(k)fluoranthene	1.16	0.91	mg/Kg dry	1.78	0.611	30.5 *	40-140			MS-09
Bis(2-chloroethoxy)methane	1.10	1.8	mg/Kg dry	1.78	ND	61.7	40-140			
Bis(2-chloroethyl)ether	1.02	1.8	mg/Kg dry	1.78	ND	57.0	40-140			
Bis(2-chloroisopropyl)ether	1.14	1.8	mg/Kg dry	1.78	ND	63.7	40-140			
Bis(2-Ethylhexyl)phthalate	1.12	1.8	mg/Kg dry	1.78	ND	62.6	40-140			
4-Bromophenylphenylether	1.00	1.8	mg/Kg dry	1.78	ND	56.2	40-140			
Butylbenzylphthalate	1.24	1.8	mg/Kg dry	1.78	ND	69.8	40-140			
4-Chloroaniline	0.442	3.5	mg/Kg dry	1.78	ND	24.8 *	40-140			MS-09, V-34
2-Chloronaphthalene	0.784	1.8	mg/Kg dry	1.78	ND	44.0	40-140			
2-Chlorophenol	0.940	1.8	mg/Kg dry	1.78	ND	52.7	30-130			
Chrysene	1.41	0.91	mg/Kg dry	1.78	1.42	-0.605 *	40-140			MS-09
Dibenz(a,h)anthracene	0.740	0.91	mg/Kg dry	1.78	ND	41.5	40-140			
Dibenzofuran	0.965	1.8	mg/Kg dry	1.78	ND	54.1	40-140			
Di-n-butylphthalate	1.02	1.8	mg/Kg dry	1.78	ND	57.1	40-140			
1,2-Dichlorobenzene	0.861	1.8	mg/Kg dry	1.78	ND	48.3	40-140			
1,3-Dichlorobenzene	0.874	1.8	mg/Kg dry	1.78	ND	49.0	40-140			
1,4-Dichlorobenzene	0.868	1.8	mg/Kg dry	1.78	ND	48.7	40-140			
3,3-Dichlorobenzidine	0.767	0.91	mg/Kg dry	1.78	ND	43.0	40-140			
2,4-Dichlorophenol	0.929	1.8	mg/Kg dry	1.78	ND	52.1	30-130			
Diethylphthalate	0.970	1.8	mg/Kg dry	1.78	ND	54.4	40-140			
2,4-Dimethylphenol	0.906	1.8	mg/Kg dry	1.78	ND	50.8	30-130			
Dimethylphthalate	0.998	1.8	mg/Kg dry	1.78	ND	56.0	40-140			
2,4-Dinitrophenol	ND	3.5	mg/Kg dry	1.78	ND	*	30-130			MS-09
2,4-Dinitrotoluene	0.824	1.8	mg/Kg dry	1.78	ND	46.2	40-140			
2,6-Dinitrotoluene	0.963	1.8	mg/Kg dry	1.78	ND	54.0	40-140			
Di-n-octylphthalate	1.04	1.8	mg/Kg dry	1.78	ND	58.3	40-140			
1,2-Diphenylhydrazine/Azobenzene	0.886	1.8	mg/Kg dry	1.78	ND	49.7	40-140			
Fluoranthene	1.61	0.91	mg/Kg dry	1.78	2.37	-42.9 *	40-140			MS-09
Fluorene	0.993	0.91	mg/Kg dry	1.78	ND	55.7	40-140			
Hexachlorobenzene	0.845	1.8	mg/Kg dry	1.78	ND	47.4	40-140			
Hexachlorobutadiene	0.870	1.8	mg/Kg dry	1.78	ND	48.8	40-140			
Hexachloroethane	0.556	1.8	mg/Kg dry	1.78	ND	31.2 *	40-140			MS-09
Indeno(1,2,3-cd)pyrene	1.02	0.91	mg/Kg dry	1.78	0.874	8.10 *	40-140			MS-09
Isophorone	0.948	1.8	mg/Kg dry	1.78	ND	53.2	40-140			
2-Methylnaphthalene	0.981	0.91	mg/Kg dry	1.78	ND	55.0	40-140			
2-Methylphenol	0.884	1.8	mg/Kg dry	1.78	ND	49.6	30-130			
3/4-Methylphenol	0.820	1.8	mg/Kg dry	1.78	ND	46.0	30-130			
Naphthalene	0.965	0.91	mg/Kg dry	1.78	ND	54.1	40-140			
Nitrobenzene	0.920	1.8	mg/Kg dry	1.78	ND	51.6	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
<b>Batch B225814 - SW-846 3546</b>										
<b>Matrix Spike (B225814-MS1)</b>	<b>Source: 19C0480-21</b>			Prepared: 03/15/19 Analyzed: 03/18/19						
2-Nitrophenol	0.877	1.8	mg/Kg dry	1.78	ND	49.2	30-130			
4-Nitrophenol	1.15	3.5	mg/Kg dry	1.78	ND	64.6	30-130			
<b>Pentachlorophenol</b>	0.353	1.8	mg/Kg dry	1.78	ND	<b>19.8</b> *	30-130			MS-22
<b>Phenanthrene</b>	1.28	0.91	mg/Kg dry	1.78	1.75	<b>-26.2</b> *	40-140			MS-09
Phenol	0.918	1.8	mg/Kg dry	1.78	ND	51.5	30-130			
<b>Pyrene</b>	2.10	0.91	mg/Kg dry	1.78	3.14	<b>-58.4</b> *	40-140			MS-09
1,2,4-Trichlorobenzene	0.890	1.8	mg/Kg dry	1.78	ND	49.9	40-140			
2,4,5-Trichlorophenol	0.861	1.8	mg/Kg dry	1.78	ND	48.3	30-130			
2,4,6-Trichlorophenol	0.897	1.8	mg/Kg dry	1.78	ND	50.3	30-130			
Surrogate: 2-Fluorophenol	3.83		mg/Kg dry	7.13		53.6	30-130			
Surrogate: Phenol-d6	3.77		mg/Kg dry	7.13		52.9	30-130			
Surrogate: Nitrobenzene-d5	1.94		mg/Kg dry	3.57		54.4	30-130			
Surrogate: 2-Fluorobiphenyl	1.98		mg/Kg dry	3.57		55.6	30-130			
Surrogate: 2,4,6-Tribromophenol	3.93		mg/Kg dry	7.13		55.1	30-130			
Surrogate: p-Terphenyl-d14	2.35		mg/Kg dry	3.57		65.8	30-130			
<b>Matrix Spike Dup (B225814-MSD1)</b>	<b>Source: 19C0480-21</b>			Prepared: 03/15/19 Analyzed: 03/18/19						
Acenaphthene	0.891	0.92	mg/Kg dry	1.81	ND	49.3	40-140	1.28	30	
Acenaphthylene	1.07	0.92	mg/Kg dry	1.81	ND	59.2	40-140	4.93	30	
Acetophenone	0.921	1.8	mg/Kg dry	1.81	ND	51.0	40-140	3.30	30	
<b>Aniline</b>	0.448	1.8	mg/Kg dry	1.81	ND	<b>24.8</b> *	40-140		30	MS-09, V-34
Anthracene	1.10	0.92	mg/Kg dry	1.81	ND	60.9	40-140	9.88	30	
<b>Benzo(a)anthracene</b>	1.20	0.92	mg/Kg dry	1.81	1.32	<b>-6.54</b> *	40-140	10.5	30	MS-09
<b>Benzo(a)pyrene</b>	1.59	0.92	mg/Kg dry	1.81	1.41	<b>9.74</b> *	40-140	8.75	30	MS-09
<b>Benzo(b)fluoranthene</b>	1.62	0.92	mg/Kg dry	1.81	1.57	<b>2.91</b> *	40-140	9.93	30	MS-09
<b>Benzo(g,h,i)perylene</b>	1.08	0.92	mg/Kg dry	1.81	0.979	<b>5.82</b> *	40-140	17.5	30	MS-09
<b>Benzo(k)fluoranthene</b>	1.28	0.92	mg/Kg dry	1.81	0.611	<b>36.8</b> *	40-140	9.88	30	MS-09
Bis(2-chloroethoxy)methane	1.09	1.8	mg/Kg dry	1.81	ND	60.2	40-140	1.14	30	
Bis(2-chloroethyl)ether	1.02	1.8	mg/Kg dry	1.81	ND	56.7	40-140	0.792	30	
Bis(2-chloroisopropyl)ether	1.21	1.8	mg/Kg dry	1.81	ND	66.9	40-140		30	
Bis(2-Ethylhexyl)phthalate	1.12	1.8	mg/Kg dry	1.81	ND	61.9	40-140	0.196	30	
4-Bromophenylphenylether	1.01	1.8	mg/Kg dry	1.81	ND	56.1	40-140	1.14	30	
Butylbenzylphthalate	1.22	1.8	mg/Kg dry	1.81	ND	67.4	40-140	2.18	30	
<b>4-Chloroaniline</b>	0.620	3.6	mg/Kg dry	1.81	ND	<b>34.3</b> *	40-140		30	MS-09, V-34
2-Chloronaphthalene	0.808	1.8	mg/Kg dry	1.81	ND	44.7	40-140	2.90	30	
2-Chlorophenol	1.04	1.8	mg/Kg dry	1.81	ND	57.8	30-130	10.5	30	
<b>Chrysene</b>	1.54	0.92	mg/Kg dry	1.81	1.42	<b>6.64</b> *	40-140	8.87	30	MS-09
Dibenz(a,h)anthracene	0.835	0.92	mg/Kg dry	1.81	ND	46.2	40-140	12.0	30	
Dibenzofuran	0.967	1.8	mg/Kg dry	1.81	ND	53.5	40-140	0.205	30	
Di-n-butylphthalate	1.02	1.8	mg/Kg dry	1.81	ND	56.6	40-140	0.441	30	
1,2-Dichlorobenzene	0.900	1.8	mg/Kg dry	1.81	ND	49.8	40-140	4.38	30	
1,3-Dichlorobenzene	0.862	1.8	mg/Kg dry	1.81	ND	47.7	40-140	1.37	30	
1,4-Dichlorobenzene	0.883	1.8	mg/Kg dry	1.81	ND	48.9	40-140	1.73	30	
3,3-Dichlorobenzidine	0.901	0.92	mg/Kg dry	1.81	ND	49.9	40-140	16.2	30	
2,4-Dichlorophenol	0.945	1.8	mg/Kg dry	1.81	ND	52.3	30-130	1.70	30	
Diethylphthalate	1.01	1.8	mg/Kg dry	1.81	ND	55.8	40-140	3.86	30	
2,4-Dimethylphenol	0.999	1.8	mg/Kg dry	1.81	ND	55.3	30-130	9.80	30	
Dimethylphthalate	0.974	1.8	mg/Kg dry	1.81	ND	53.9	40-140	2.50	30	
<b>2,4-Dinitrophenol</b>	ND	3.6	mg/Kg dry	1.81	ND	*	30-130	NC	30	MS-09
2,4-Dinitrotoluene	0.855	1.8	mg/Kg dry	1.81	ND	47.3	40-140		30	
2,6-Dinitrotoluene	0.970	1.8	mg/Kg dry	1.81	ND	53.7	40-140	0.763	30	
Di-n-octylphthalate	1.11	1.8	mg/Kg dry	1.81	ND	61.5	40-140	6.66	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
<b>Batch B225814 - SW-846 3546</b>										
<b>Matrix Spike Dup (B225814-MSD1)</b>										
		<b>Source: 19C0480-21</b>			Prepared: 03/15/19 Analyzed: 03/18/19					
1,2-Diphenylhydrazine/Azobenzene	0.925	1.8	mg/Kg dry	1.81	ND	51.2	40-140	4.29	30	
<b>Fluoranthene</b>	1.96	0.92	mg/Kg dry	1.81	2.37	-22.7 *	40-140	19.8	30	MS-09
Fluorene	1.01	0.92	mg/Kg dry	1.81	ND	56.0	40-140	1.86	30	
Hexachlorobenzene	0.885	1.8	mg/Kg dry	1.81	ND	49.0	40-140	4.64	30	
Hexachlorobutadiene	0.914	1.8	mg/Kg dry	1.81	ND	50.6	40-140	4.94	30	
<b>Hexachloroethane</b>	0.620	1.8	mg/Kg dry	1.81	ND	34.3 *	40-140		30	MS-09
<b>Indeno(1,2,3-cd)pyrene</b>	1.12	0.92	mg/Kg dry	1.81	0.874	13.7 *	40-140	9.71	30	MS-09
Isophorone	0.988	1.8	mg/Kg dry	1.81	ND	54.7	40-140	4.10	30	
2-Methylnaphthalene	1.03	0.92	mg/Kg dry	1.81	ND	57.2	40-140	5.24	30	
2-Methylphenol	0.948	1.8	mg/Kg dry	1.81	ND	52.5	30-130	7.00	30	
3/4-Methylphenol	0.903	1.8	mg/Kg dry	1.81	ND	50.0	30-130	9.65	30	
Naphthalene	1.00	0.92	mg/Kg dry	1.81	ND	55.5	40-140	3.87	30	
Nitrobenzene	0.948	1.8	mg/Kg dry	1.81	ND	52.5	40-140	3.05	30	
2-Nitrophenol	0.898	1.8	mg/Kg dry	1.81	ND	49.7	30-130	2.33	30	
4-Nitrophenol	0.858	3.6	mg/Kg dry	1.81	ND	47.5	30-130		30	
Pentachlorophenol	0.589	1.8	mg/Kg dry	1.81	ND	32.6	30-130		30	
<b>Phenanthrene</b>	1.47	0.92	mg/Kg dry	1.81	1.75	-15.2 *	40-140	14.0	30	MS-09
Phenol	1.00	1.8	mg/Kg dry	1.81	ND	55.5	30-130	8.79	30	
<b>Pyrene</b>	2.35	0.92	mg/Kg dry	1.81	3.14	-43.5 *	40-140	11.5	30	MS-09
1,2,4-Trichlorobenzene	0.911	1.8	mg/Kg dry	1.81	ND	50.4	40-140	2.32	30	
2,4,5-Trichlorophenol	0.901	1.8	mg/Kg dry	1.81	ND	49.9	30-130	4.58	30	
2,4,6-Trichlorophenol	0.961	1.8	mg/Kg dry	1.81	ND	53.2	30-130	6.92	30	
Surrogate: 2-Fluorophenol	4.20		mg/Kg dry	7.23		58.1	30-130			
Surrogate: Phenol-d6	4.07		mg/Kg dry	7.23		56.3	30-130			
Surrogate: Nitrobenzene-d5	1.98		mg/Kg dry	3.61		54.7	30-130			
Surrogate: 2-Fluorobiphenyl	2.04		mg/Kg dry	3.61		56.5	30-130			
Surrogate: 2,4,6-Tribromophenol	3.92		mg/Kg dry	7.23		54.2	30-130			
Surrogate: p-Terphenyl-d14	2.43		mg/Kg dry	3.61		67.2	30-130			

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**QUALITY CONTROL**

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B225798 - SW-846 3540C**

**Blank (B225798-BLK1)**

Prepared: 03/14/19 Analyzed: 03/18/19

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	0.185		mg/Kg wet	0.200		92.6	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.183		mg/Kg wet	0.200		91.7	30-150			
Surrogate: Tetrachloro-m-xylene	0.172		mg/Kg wet	0.200		86.2	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.172		mg/Kg wet	0.200		86.1	30-150			

**LCS (B225798-BS1)**

Prepared: 03/14/19 Analyzed: 03/18/19

Aroclor-1016	0.16	0.020	mg/Kg wet	0.200		77.6	40-140			
Aroclor-1016 [2C]	0.16	0.020	mg/Kg wet	0.200		79.0	40-140			
Aroclor-1260	0.15	0.020	mg/Kg wet	0.200		77.2	40-140			
Aroclor-1260 [2C]	0.15	0.020	mg/Kg wet	0.200		76.1	40-140			
Surrogate: Decachlorobiphenyl	0.184		mg/Kg wet	0.200		91.9	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.184		mg/Kg wet	0.200		92.0	30-150			
Surrogate: Tetrachloro-m-xylene	0.171		mg/Kg wet	0.200		85.3	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.171		mg/Kg wet	0.200		85.4	30-150			

**LCS Dup (B225798-BSD1)**

Prepared: 03/14/19 Analyzed: 03/18/19

Aroclor-1016	0.16	0.020	mg/Kg wet	0.200		77.8	40-140	0.195	30	
Aroclor-1016 [2C]	0.15	0.020	mg/Kg wet	0.200		77.1	40-140	2.35	30	
Aroclor-1260	0.15	0.020	mg/Kg wet	0.200		77.1	40-140	0.139	30	
Aroclor-1260 [2C]	0.15	0.020	mg/Kg wet	0.200		75.0	40-140	1.36	30	
Surrogate: Decachlorobiphenyl	0.176		mg/Kg wet	0.200		88.0	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.176		mg/Kg wet	0.200		87.8	30-150			
Surrogate: Tetrachloro-m-xylene	0.170		mg/Kg wet	0.200		84.8	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.170		mg/Kg wet	0.200		84.8	30-150			

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**QUALITY CONTROL**

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B225798 - SW-846 3540C**

**Matrix Spike (B225798-MS1)**

**Source: 19C0480-01**

Prepared: 03/14/19 Analyzed: 03/18/19

Aroclor-1016	0.23	0.088	mg/Kg dry	0.220	ND	107	40-140			
Aroclor-1016 [2C]	0.25	0.088	mg/Kg dry	0.220	ND	114	40-140			
Aroclor-1260	0.16	0.088	mg/Kg dry	0.220	ND	72.4	40-140			
Aroclor-1260 [2C]	0.17	0.088	mg/Kg dry	0.220	ND	76.1	40-140			
Surrogate: Decachlorobiphenyl	0.155		mg/Kg dry	0.220		70.2	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.171		mg/Kg dry	0.220		77.5	30-150			
Surrogate: Tetrachloro-m-xylene	0.211		mg/Kg dry	0.220		95.9	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.204		mg/Kg dry	0.220		92.9	30-150			

**Matrix Spike Dup (B225798-MSD1)**

**Source: 19C0480-01**

Prepared: 03/14/19 Analyzed: 03/18/19

Aroclor-1016	0.21	0.088	mg/Kg dry	0.220	ND	95.6	40-140	11.0	50	
Aroclor-1016 [2C]	0.23	0.088	mg/Kg dry	0.220	ND	104	40-140	8.77	50	
Aroclor-1260	0.15	0.088	mg/Kg dry	0.220	ND	66.4	40-140	8.56	50	
Aroclor-1260 [2C]	0.15	0.088	mg/Kg dry	0.220	ND	69.9	40-140	8.47	50	
Surrogate: Decachlorobiphenyl	0.140		mg/Kg dry	0.220		63.8	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.156		mg/Kg dry	0.220		70.9	30-150			
Surrogate: Tetrachloro-m-xylene	0.195		mg/Kg dry	0.220		88.6	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.190		mg/Kg dry	0.220		86.4	30-150			

**Batch B225799 - SW-846 3540C**

**Blank (B225799-BLK1)**

Prepared: 03/14/19 Analyzed: 03/18/19

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	0.210		mg/Kg wet	0.200		105	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.219		mg/Kg wet	0.200		109	30-150			
Surrogate: Tetrachloro-m-xylene	0.209		mg/Kg wet	0.200		104	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.213		mg/Kg wet	0.200		106	30-150			

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**QUALITY CONTROL**

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B225799 - SW-846 3540C**

**LCS (B225799-BS1)**

Prepared: 03/14/19 Analyzed: 03/18/19

Aroclor-1016	0.19	0.020	mg/Kg wet	0.200		94.3	40-140			
Aroclor-1016 [2C]	0.18	0.020	mg/Kg wet	0.200		92.0	40-140			
Aroclor-1260	0.18	0.020	mg/Kg wet	0.200		90.4	40-140			
Aroclor-1260 [2C]	0.17	0.020	mg/Kg wet	0.200		87.5	40-140			
Surrogate: Decachlorobiphenyl	0.205		mg/Kg wet	0.200		103	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.212		mg/Kg wet	0.200		106	30-150			
Surrogate: Tetrachloro-m-xylene	0.209		mg/Kg wet	0.200		105	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.212		mg/Kg wet	0.200		106	30-150			

**LCS Dup (B225799-BSD1)**

Prepared: 03/14/19 Analyzed: 03/18/19

Aroclor-1016	0.20	0.020	mg/Kg wet	0.200		97.8	40-140	3.65	30	
Aroclor-1016 [2C]	0.19	0.020	mg/Kg wet	0.200		95.5	40-140	3.80	30	
Aroclor-1260	0.19	0.020	mg/Kg wet	0.200		94.5	40-140	4.45	30	
Aroclor-1260 [2C]	0.18	0.020	mg/Kg wet	0.200		91.7	40-140	4.68	30	
Surrogate: Decachlorobiphenyl	0.209		mg/Kg wet	0.200		105	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.216		mg/Kg wet	0.200		108	30-150			
Surrogate: Tetrachloro-m-xylene	0.213		mg/Kg wet	0.200		106	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.216		mg/Kg wet	0.200		108	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
<b>Batch B225812 - SW-846 3546</b>										
<b>Blank (B225812-BLK1)</b>										
					Prepared: 03/15/19 Analyzed: 03/18/19					
TPH (C9-C36)	ND	8.3	mg/Kg wet							
Surrogate: 2-Fluorobiphenyl	1.76		mg/Kg wet	3.33		52.6	40-140			
<b>LCS (B225812-BS1)</b>										
					Prepared: 03/15/19 Analyzed: 03/18/19					
TPH (C9-C36)	29.0	8.3	mg/Kg wet	33.3		87.0	40-140			
Surrogate: 2-Fluorobiphenyl	2.39		mg/Kg wet	3.33		71.7	40-140			
<b>LCS Dup (B225812-BSD1)</b>										
					Prepared: 03/15/19 Analyzed: 03/18/19					
TPH (C9-C36)	28.2	8.3	mg/Kg wet	33.3		84.5	40-140	2.98	30	
Surrogate: 2-Fluorobiphenyl	2.16		mg/Kg wet	3.33		64.7	40-140			
<b>Matrix Spike (B225812-MS1)</b>										
			<b>Source: 19C0480-02</b>		Prepared: 03/15/19 Analyzed: 03/18/19					
TPH (C9-C36)	969	180	mg/Kg dry	37.0	1070	-270 *	40-140			MS-19
Surrogate: 2-Fluorobiphenyl	0.00		mg/Kg dry	3.70		*	40-140			S-01
<b>Matrix Spike Dup (B225812-MSD1)</b>										
			<b>Source: 19C0480-02</b>		Prepared: 03/15/19 Analyzed: 03/18/19					
TPH (C9-C36)	999	180	mg/Kg dry	37.0	1070	-187 *	40-140	3.11	30	MS-19
Surrogate: 2-Fluorobiphenyl	0.00		mg/Kg dry	3.70		*	40-140			S-01
<b>Batch B225815 - SW-846 3546</b>										
<b>Blank (B225815-BLK1)</b>										
					Prepared: 03/15/19 Analyzed: 03/16/19					
TPH (C9-C36)	ND	8.3	mg/Kg wet							
Surrogate: 2-Fluorobiphenyl	1.69		mg/Kg wet	3.33		50.7	40-140			
<b>LCS (B225815-BS1)</b>										
					Prepared: 03/15/19 Analyzed: 03/16/19					
TPH (C9-C36)	16.0	8.3	mg/Kg wet	33.3		48.1	40-140			
Surrogate: 2-Fluorobiphenyl	1.43		mg/Kg wet	3.33		42.9	40-140			
<b>LCS Dup (B225815-BSD1)</b>										
					Prepared: 03/15/19 Analyzed: 03/16/19					
TPH (C9-C36)	18.2	8.3	mg/Kg wet	33.3		54.6	40-140	12.7	30	
Surrogate: 2-Fluorobiphenyl	1.66		mg/Kg wet	3.33		49.7	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
<b>Batch B225636 - SW-846 7471</b>										
<b>Blank (B225636-BLK1)</b> Prepared: 03/13/19 Analyzed: 03/14/19										
Mercury	ND	0.025	mg/Kg wet							
<b>LCS (B225636-BS1)</b> Prepared: 03/13/19 Analyzed: 03/14/19										
Mercury	3.55	0.38	mg/Kg wet	3.71		95.8	65-135			
<b>LCS Dup (B225636-BSD1)</b> Prepared: 03/13/19 Analyzed: 03/14/19										
Mercury	3.45	0.38	mg/Kg wet	3.71		93.0	65-135	2.93	30	
<b>Batch B225637 - SW-846 7471</b>										
<b>Blank (B225637-BLK1)</b> Prepared: 03/13/19 Analyzed: 03/15/19										
Mercury	ND	0.025	mg/Kg wet							
<b>LCS (B225637-BS1)</b> Prepared: 03/13/19 Analyzed: 03/15/19										
Mercury	3.20	0.37	mg/Kg wet	3.71		86.3	65-135			
<b>LCS Dup (B225637-BSD1)</b> Prepared: 03/13/19 Analyzed: 03/15/19										
Mercury	3.37	0.38	mg/Kg wet	3.71		90.7	65-135	4.99	30	
<b>Duplicate (B225637-DUP1)</b> <b>Source: 19C0480-13</b> Prepared: 03/13/19 Analyzed: 03/15/19										
Mercury	0.0636	0.029	mg/Kg dry		0.0451			34.0	35	
<b>Matrix Spike (B225637-MS1)</b> <b>Source: 19C0480-13</b> Prepared: 03/13/19 Analyzed: 03/15/19										
Mercury	0.418	0.028	mg/Kg dry	0.376	0.0451	99.2	75-125			
<b>Batch B225680 - SW-846 3050B</b>										
<b>Blank (B225680-BLK1)</b> Prepared: 03/13/19 Analyzed: 03/15/19										
Antimony	ND	1.7	mg/Kg wet							
Arsenic	ND	1.7	mg/Kg wet							
Barium	ND	1.7	mg/Kg wet							
Beryllium	ND	0.17	mg/Kg wet							
Cadmium	ND	0.17	mg/Kg wet							
Chromium	ND	0.33	mg/Kg wet							
Lead	ND	0.50	mg/Kg wet							
Nickel	ND	0.33	mg/Kg wet							
Selenium	ND	3.3	mg/Kg wet							
Silver	ND	0.33	mg/Kg wet							
Thallium	ND	1.7	mg/Kg wet							
Vanadium	ND	0.67	mg/Kg wet							
Zinc	ND	0.67	mg/Kg wet							

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

**QUALITY CONTROL**

**Metals Analyses (Total) - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B225680 - SW-846 3050B</b>										
<b>LCS (B225680-BS1)</b>										
					Prepared: 03/13/19 Analyzed: 03/15/19					
Antimony	63.4	5.1	mg/Kg wet	89.6		70.8	3.3-196.4			
Arsenic	191	5.1	mg/Kg wet	202		94.7	82.7-117.3			
Barium	274	5.1	mg/Kg wet	270		101	82.6-117.8			
Beryllium	93.1	0.51	mg/Kg wet	96.8		96.2	83.4-116.7			
Cadmium	134	0.51	mg/Kg wet	141		95.2	83-117			
Chromium	161	1.0	mg/Kg wet	167		96.4	81.4-118			
Lead	70.5	1.5	mg/Kg wet	73.8		95.5	82.9-117.1			
Nickel	89.1	1.0	mg/Kg wet	89.4		99.7	82.9-117.5			
Selenium	44.0	10	mg/Kg wet	49.9		88.1	79.2-120.6			
Silver	75.2	1.0	mg/Kg wet	71.1		106	79.7-120.1			
Thallium	65.0	5.1	mg/Kg wet	58.5		111	80.7-119.5			
Vanadium	52.5	2.0	mg/Kg wet	58.2		90.1	79-121			
Zinc	255	2.0	mg/Kg wet	264		96.4	80.7-119.3			
<b>LCS Dup (B225680-BSD1)</b>										
					Prepared: 03/13/19 Analyzed: 03/15/19					
Antimony	65.0	5.0	mg/Kg wet	89.6		72.5	3.3-196.4	2.35	30	
Arsenic	189	5.0	mg/Kg wet	202		93.7	82.7-117.3	1.03	30	
Barium	271	5.0	mg/Kg wet	270		100	82.6-117.8	0.984	30	
Beryllium	96.4	0.50	mg/Kg wet	96.8		99.6	83.4-116.7	3.49	30	
Cadmium	136	0.50	mg/Kg wet	141		96.8	83-117	1.66	30	
Chromium	163	1.0	mg/Kg wet	167		97.5	81.4-118	1.08	30	
Lead	70.5	1.5	mg/Kg wet	73.8		95.6	82.9-117.1	0.0869	30	
Nickel	90.6	1.0	mg/Kg wet	89.4		101	82.9-117.5	1.66	30	
Selenium	43.4	10	mg/Kg wet	49.9		87.1	79.2-120.6	1.17	30	
Silver	73.9	1.0	mg/Kg wet	71.1		104	79.7-120.1	1.83	30	
Thallium	63.1	5.0	mg/Kg wet	58.5		108	80.7-119.5	3.03	30	
Vanadium	51.9	2.0	mg/Kg wet	58.2		89.2	79-121	0.988	30	
Zinc	257	2.0	mg/Kg wet	264		97.3	80.7-119.3	0.885	30	
<b>Duplicate (B225680-DUP1)</b>										
			<b>Source: 19C0480-06</b>		Prepared: 03/13/19 Analyzed: 03/15/19					
Antimony	ND	1.9	mg/Kg dry		ND			NC	35	
Arsenic	4.25	1.9	mg/Kg dry		5.16			19.3	35	
Barium	28.3	1.9	mg/Kg dry		33.2			15.9	35	
Beryllium	0.378	0.19	mg/Kg dry		0.385			1.94	35	
Cadmium	0.325	0.19	mg/Kg dry		0.345			5.86	35	
Chromium	15.8	0.37	mg/Kg dry		17.0			7.32	35	
Lead	24.0	0.56	mg/Kg dry		24.7			2.99	35	
Nickel	12.9	0.37	mg/Kg dry		13.6			5.04	35	
Selenium	ND	3.7	mg/Kg dry		ND			NC	35	
Silver	ND	0.37	mg/Kg dry		ND			NC	35	
Thallium	ND	1.9	mg/Kg dry		ND			NC	35	
Vanadium	24.9	0.74	mg/Kg dry		25.4			2.11	35	
Zinc	43.1	0.74	mg/Kg dry		43.9			1.79	35	

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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 B225680 - SW-846 3050B**

**MRL Check (B225680-MRL1)**

Prepared: 03/13/19 Analyzed: 03/15/19

Lead	0.528	0.49	mg/Kg wet	0.493		107	80-120			
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**Matrix Spike (B225680-MS1)**

**Source: 19C0480-06**

Prepared: 03/13/19 Analyzed: 03/15/19

<b>Antimony</b>	7.20	1.8	mg/Kg dry	18.3	ND	<b>39.3</b> *	75-125			MS-07
Arsenic	21.1	1.8	mg/Kg dry	18.3	5.16	87.3	75-125			
Barium	49.1	1.8	mg/Kg dry	18.3	33.2	87.3	75-125			
Beryllium	17.8	0.18	mg/Kg dry	18.3	0.385	95.3	75-125			
Cadmium	17.4	0.18	mg/Kg dry	18.3	0.345	93.0	75-125			
Chromium	33.6	0.37	mg/Kg dry	18.3	17.0	90.7	75-125			
Lead	41.4	0.55	mg/Kg dry	18.3	24.7	91.3	75-125			
Nickel	30.1	0.37	mg/Kg dry	18.3	13.6	90.0	75-125			
Selenium	14.4	3.7	mg/Kg dry	18.3	ND	78.4	75-125			
Silver	19.2	0.37	mg/Kg dry	18.3	ND	105	75-125			
<b>Thallium</b>	23.8	1.8	mg/Kg dry	18.3	ND	<b>130</b> *	75-125			MS-14
Vanadium	43.4	0.73	mg/Kg dry	18.3	25.4	98.6	75-125			
Zinc	79.3	0.73	mg/Kg dry	36.6	43.9	96.7	75-125			

**Batch B225880 - SW-846 3050B**

**Blank (B225880-BLK1)**

Prepared: 03/15/19 Analyzed: 03/18/19

Antimony	ND	1.7	mg/Kg wet							
Arsenic	ND	1.7	mg/Kg wet							
Barium	ND	1.7	mg/Kg wet							
Beryllium	ND	0.17	mg/Kg wet							
Cadmium	ND	0.17	mg/Kg wet							
Chromium	ND	0.33	mg/Kg wet							
Lead	ND	0.50	mg/Kg wet							
Nickel	ND	0.33	mg/Kg wet							
Selenium	ND	3.3	mg/Kg wet							
Silver	ND	0.33	mg/Kg wet							
Thallium	ND	1.7	mg/Kg wet							
Vanadium	ND	0.67	mg/Kg wet							
Zinc	ND	0.67	mg/Kg wet							

**LCS (B225880-BS1)**

Prepared: 03/15/19 Analyzed: 03/18/19

Antimony	70.4	4.8	mg/Kg wet	89.6		78.5	3.3-196.4			
Arsenic	182	4.8	mg/Kg wet	202		89.9	82.7-117.3			
Barium	254	4.8	mg/Kg wet	270		94.1	82.6-117.8			
Beryllium	90.4	0.48	mg/Kg wet	96.8		93.4	83.4-116.7			
Cadmium	132	0.48	mg/Kg wet	141		93.3	83-117			
Chromium	153	0.97	mg/Kg wet	167		91.6	81.4-118			
Lead	65.5	1.5	mg/Kg wet	73.8		88.8	82.9-117.1			
Nickel	85.2	0.97	mg/Kg wet	89.4		95.3	82.9-117.5			
Selenium	41.1	9.7	mg/Kg wet	49.9		82.4	79.2-120.6			
Silver	69.0	0.97	mg/Kg wet	71.1		97.0	79.7-120.1			
Thallium	63.8	4.8	mg/Kg wet	58.5		109	80.7-119.5			
Vanadium	50.6	1.9	mg/Kg wet	58.2		87.0	79-121			
Zinc	237	1.9	mg/Kg wet	264		89.7	80.7-119.3			



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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 B225880 - SW-846 3050B**

**LCS Dup (B225880-BSD1)**

Prepared: 03/15/19 Analyzed: 03/18/19

Antimony	71.6	4.9	mg/Kg wet	89.6		79.9	3.3-196.4	1.66	30	
Arsenic	188	4.9	mg/Kg wet	202		92.9	82.7-117.3	3.31	30	
Barium	267	4.9	mg/Kg wet	270		99.0	82.6-117.8	4.99	30	
Beryllium	92.2	0.49	mg/Kg wet	96.8		95.2	83.4-116.7	1.93	30	
Cadmium	131	0.49	mg/Kg wet	141		93.0	83-117	0.310	30	
Chromium	158	0.98	mg/Kg wet	167		94.9	81.4-118	3.46	30	
Lead	71.7	1.5	mg/Kg wet	73.8		97.2	82.9-117.1	9.03	30	
Nickel	86.9	0.98	mg/Kg wet	89.4		97.2	82.9-117.5	1.96	30	
Selenium	42.6	9.8	mg/Kg wet	49.9		85.4	79.2-120.6	3.48	30	
Silver	73.0	0.98	mg/Kg wet	71.1		103	79.7-120.1	5.73	30	
Thallium	61.8	4.9	mg/Kg wet	58.5		106	80.7-119.5	3.18	30	
Vanadium	53.1	2.0	mg/Kg wet	58.2		91.3	79-121	4.80	30	
Zinc	247	2.0	mg/Kg wet	264		93.5	80.7-119.3	4.07	30	

**Duplicate (B225880-DUP1)**

**Source: 19C0480-21**

Prepared: 03/15/19 Analyzed: 03/18/19

Antimony	2.21	1.8	mg/Kg dry		ND			NC	35	
Arsenic	5.65	1.8	mg/Kg dry		5.42			4.11	35	
Barium	29.2	1.8	mg/Kg dry		31.1			6.16	35	
Beryllium	0.381	0.18	mg/Kg dry		0.353			7.57	35	
Cadmium	0.324	0.18	mg/Kg dry		0.331			1.97	35	
Chromium	14.2	0.36	mg/Kg dry		14.4			1.35	35	
Lead	21.9	0.54	mg/Kg dry		23.5			6.82	35	
Nickel	11.1	0.36	mg/Kg dry		11.6			4.46	35	
Selenium	ND	3.6	mg/Kg dry		ND			NC	35	
Silver	ND	0.36	mg/Kg dry		ND			NC	35	
Thallium	5.64	1.8	mg/Kg dry		ND			NC	35	
Vanadium	22.5	0.73	mg/Kg dry		22.2			1.15	35	
Zinc	34.5	0.73	mg/Kg dry		33.9			1.58	35	

**MRL Check (B225880-MRL1)**

Prepared: 03/15/19 Analyzed: 03/18/19

Lead	0.522	0.49	mg/Kg wet	0.492		106	80-120			
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**Matrix Spike (B225880-MS1)**

**Source: 19C0480-21**

Prepared: 03/15/19 Analyzed: 03/18/19

Antimony	7.64	1.8	mg/Kg dry	18.2	ND	41.9 *	75-125			MS-07
Arsenic	21.9	1.8	mg/Kg dry	18.2	5.42	90.2	75-125			
Barium	46.7	1.8	mg/Kg dry	18.2	31.1	85.5	75-125			
Beryllium	17.5	0.18	mg/Kg dry	18.2	0.353	94.1	75-125			
Cadmium	17.0	0.18	mg/Kg dry	18.2	0.331	91.3	75-125			
Chromium	31.2	0.36	mg/Kg dry	18.2	14.4	92.0	75-125			
Lead	38.9	0.55	mg/Kg dry	18.2	23.5	84.5	75-125			
Nickel	28.4	0.36	mg/Kg dry	18.2	11.6	92.3	75-125			
Selenium	14.1	3.6	mg/Kg dry	18.2	ND	77.6	75-125			
Silver	18.2	0.36	mg/Kg dry	18.2	ND	99.9	75-125			
Thallium	22.2	1.8	mg/Kg dry	18.2	ND	122	75-125			
Vanadium	39.5	0.73	mg/Kg dry	18.2	22.2	94.5	75-125			
Zinc	67.0	0.73	mg/Kg dry	36.5	33.9	90.6	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
<b>Batch B225572 - SW-846 9045C</b>										
<b>LCS (B225572-BS1)</b> Prepared & Analyzed: 03/12/19										
pH	6.05		pH Units	6.00		101	90-110			
<b>LCS (B225572-BS2)</b> Prepared & Analyzed: 03/12/19										
pH	6.00		pH Units	6.00		100	90-110			
<b>Duplicate (B225572-DUP1)</b> Source: 19C0480-26 Prepared & Analyzed: 03/12/19										
pH	7.7		pH Units		7.6			0.731	5	
<b>Duplicate (B225572-DUP2)</b> Source: 19C0480-24 Prepared & Analyzed: 03/12/19										
pH	8.2		pH Units		7.8			4.65	5	
<b>Batch B225573 - SW-846 9045C</b>										
<b>LCS (B225573-BS1)</b> Prepared & Analyzed: 03/12/19										
pH	6.01		pH Units	6.00		100	90-110			
<b>LCS (B225573-BS2)</b> Prepared & Analyzed: 03/12/19										
pH	5.99		pH Units	6.00		99.9	90-110			
<b>Batch B225720 - SM21-22 2510B Modified</b>										
<b>Blank (B225720-BLK1)</b> Prepared & Analyzed: 03/14/19										
Specific conductance	ND	2.0	µmhos/cm							
<b>LCS (B225720-BS1)</b> Prepared & Analyzed: 03/14/19										
Specific conductance	200		µmhos/cm	192		102	90-110			
<b>Batch B225772 - SW-846 9014</b>										
<b>Blank (B225772-BLK1)</b> Prepared: 03/14/19 Analyzed: 03/15/19										
Reactive Cyanide	ND	0.40	mg/Kg							
<b>LCS (B225772-BS1)</b> Prepared: 03/14/19 Analyzed: 03/15/19										
Reactive Cyanide	9.5	0.40	mg/Kg	10.0		95.4	83.6-111			
<b>Batch B225773 - SW-846 9030A</b>										
<b>Blank (B225773-BLK1)</b> Prepared: 03/14/19 Analyzed: 03/15/19										
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
<b>Batch B225773 - SW-846 9030A</b>										
<b>LCS (B225773-BS1)</b>				Prepared: 03/14/19 Analyzed: 03/15/19						
Reactive Sulfide	12	2.0	mg/Kg	14.8		81.1	54.9-121			
<b>Batch B225855 - SM21-22 2510B Modified</b>										
<b>Blank (B225855-BLK1)</b>				Prepared & Analyzed: 03/15/19						
Specific conductance	ND	2.0	µmhos/cm							
<b>LCS (B225855-BS1)</b>				Prepared & Analyzed: 03/15/19						
Specific conductance	190		µmhos/cm	192		101	90-110			
<b>Duplicate (B225855-DUP1)</b>				<b>Source: 19C0480-12</b>			Prepared & Analyzed: 03/15/19			
Specific conductance	9.1	2.0	µmhos/cm		8.8			3.91	21	
<b>Duplicate (B225855-DUP2)</b>				<b>Source: 19C0480-16</b>			Prepared & Analyzed: 03/15/19			
Specific conductance	13	2.0	µmhos/cm		13			2.53	21	
<b>Batch B225873 - SW-846 9014</b>										
<b>Blank (B225873-BLK1)</b>				Prepared: 03/15/19 Analyzed: 03/16/19						
Reactive Cyanide	ND	0.40	mg/Kg							
<b>LCS (B225873-BS1)</b>				Prepared: 03/15/19 Analyzed: 03/16/19						
Reactive Cyanide	9.5	0.40	mg/Kg	10.0		95.4	83.6-111			
<b>Batch B225875 - SW-846 9030A</b>										
<b>Blank (B225875-BLK1)</b>				Prepared: 03/15/19 Analyzed: 03/16/19						
Reactive Sulfide	ND	2.0	mg/Kg							
<b>LCS (B225875-BS1)</b>				Prepared: 03/15/19 Analyzed: 03/16/19						
Reactive Sulfide	12	2.0	mg/Kg	14.8		78.4	54.9-121			
<b>Batch B225897 - SW-846 9014</b>										
<b>Blank (B225897-BLK1)</b>				Prepared: 03/16/19 Analyzed: 03/18/19						
Reactive Cyanide	ND	0.40	mg/Kg							
<b>LCS (B225897-BS1)</b>				Prepared: 03/16/19 Analyzed: 03/18/19						
Reactive Cyanide	11	0.40	mg/Kg	10.0		107	83.6-111			

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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
<b>Batch B225899 - SW-846 9030A</b>										
<b>Blank (B225899-BLK1)</b>					Prepared: 03/16/19 Analyzed: 03/18/19					
Reactive Sulfide	ND	2.0	mg/Kg							
<b>LCS (B225899-BS1)</b>					Prepared: 03/16/19 Analyzed: 03/18/19					
Reactive Sulfide	12	2.0	mg/Kg	14.8		81.1	54.9-121			
<b>Batch B225914 - SM21-22 2510B Modified</b>										
<b>Blank (B225914-BLK1)</b>					Prepared & Analyzed: 03/16/19					
Specific conductance	ND	2.0	µmhos/cm							
<b>LCS (B225914-BS1)</b>					Prepared & Analyzed: 03/16/19					
Specific conductance	190		µmhos/cm	192		100	90-110			
<b>Batch B225994 - % Solids</b>										
<b>Duplicate (B225994-DUP2)</b>					<b>Source: 19C0480-01</b> Prepared & Analyzed: 03/18/19					
% Solids	89.9		% Wt		90.9			1.07	20	
<b>Duplicate (B225994-DUP3)</b>					<b>Source: 19C0480-10</b> Prepared & Analyzed: 03/18/19					
% Solids	88.9		% Wt		90.3			1.46	20	
<b>Duplicate (B225994-DUP4)</b>					<b>Source: 19C0480-15</b> Prepared & Analyzed: 03/18/19					
% Solids	87.7		% Wt		87.7			0.0270	20	

**IDENTIFICATION SUMMARY  
FOR SINGLE COMPONENT ANALYTES**

TP-F3 (5-10)

*SW-846 8082A*

Lab Sample ID: 19C0480-09 Date(s) Analyzed: 03/18/2019 03/18/2019

Instrument ID (1): ECD4 Instrument ID (2): ECD4

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	-0.030	0.030	0.18	
	2	0.000	-0.030	0.030	0.21	15.4

**IDENTIFICATION SUMMARY  
FOR SINGLE COMPONENT ANALYTES**  
*SW-846 8082A*

LCS
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Lab Sample ID:                   B225798-BS1                                        Date(s) Analyzed:           03/18/2019                     03/18/2019          

Instrument ID (1):                   ECD4                                        Instrument ID (2):                   ECD4                  

GC Column (1):                      ID:                      (mm)                      GC Column (2):                      ID:                      (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.16	
	2	0.000	-0.030	0.030	0.16	0.0
Aroclor-1260	1	0.000	-0.030	0.030	0.15	
	2	0.000	-0.030	0.030	0.15	0.0

**IDENTIFICATION SUMMARY  
FOR SINGLE COMPONENT ANALYTES**

LCS Dup

*SW-846 8082A*

Lab Sample ID:                   B225798-BSD1                                        Date(s) Analyzed:           03/18/2019                     03/18/2019          

Instrument ID (1):                   ECD4                                        Instrument ID (2):                   ECD4                  

GC Column (1):                      ID:                      (mm)                      GC Column (2):                      ID:                      (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.16	
	2	0.000	-0.030	0.030	0.15	6.5
Aroclor-1260	1	0.000	-0.030	0.030	0.15	
	2	0.000	-0.030	0.030	0.15	0.0

**IDENTIFICATION SUMMARY  
FOR SINGLE COMPONENT ANALYTES**

**Matrix Spike**

*SW-846 8082A*

Lab Sample ID:                   B225798-MS1                                        Date(s) Analyzed:           03/18/2019                     03/18/2019          

Instrument ID (1):                   ECD4                                        Instrument ID (2):                   ECD4                  

GC Column (1):                      ID:                      (mm)                      GC Column (2):                      ID:                      (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.23	
	2	0.000	-0.030	0.030	0.25	4.1
Aroclor-1260	1	0.000	-0.030	0.030	0.16	
	2	0.000	-0.030	0.030	0.17	6.1



**IDENTIFICATION SUMMARY  
FOR SINGLE COMPONENT ANALYTES**

**Matrix Spike Dup**

*SW-846 8082A*

Lab Sample ID:           B225798-MSD1                                Date(s) Analyzed:           03/18/2019                     03/18/2019          

Instrument ID (1):           ECD4                                                Instrument ID (2):           ECD4          

GC Column (1):                                      ID:                      (mm)                      GC Column (2):                                      ID:                      (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.21	
	2	0.000	-0.030	0.030	0.23	9.1
Aroclor-1260	1	0.000	-0.030	0.030	0.15	
	2	0.000	-0.030	0.030	0.15	0.0

**IDENTIFICATION SUMMARY  
FOR SINGLE COMPONENT ANALYTES**

<b>LCS</b>
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*SW-846 8082A*

Lab Sample ID:                     B225799-BS1                                          Date(s) Analyzed:           03/18/2019                     03/18/2019          

Instrument ID (1):                     ECD5                                          Instrument ID (2):                     ECD5                    

GC Column (1):                      ID:                      (mm)                      GC Column (2):                      ID:                      (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.19	
	2	0.000	-0.030	0.030	0.18	5.4
Aroclor-1260	1	0.000	-0.030	0.030	0.18	
	2	0.000	-0.030	0.030	0.17	5.7

**IDENTIFICATION SUMMARY  
FOR SINGLE COMPONENT ANALYTES**

**LCS Dup**

*SW-846 8082A*

Lab Sample ID:                     B225799-BSD1                                          Date(s) Analyzed:           03/18/2019                     03/18/2019          

Instrument ID (1):                     ECD5                                          Instrument ID (2):                     ECD5                    

GC Column (1):                      ID:                      (mm)                      GC Column (2):                      ID:                      (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.20	
	2	0.000	-0.030	0.030	0.19	5.1
Aroclor-1260	1	0.000	-0.030	0.030	0.19	
	2	0.000	-0.030	0.030	0.18	5.4

**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.
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-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.
MS-07	Matrix spike recovery is outside of control limits. Analysis is in control based on laboratory fortified blank recovery. Possibility of sample matrix effects that lead to low bias for reported result or non-homogeneous sample aliquot cannot be eliminated.
MS-09	Matrix spike recovery and/or matrix spike duplicate recovery outside of control limits. Possibility of sample matrix effects that lead to a low bias for reported result or non-homogeneous sample aliquots cannot be eliminated.
MS-14	Matrix spike recovery is outside of control limits. Data validation is not affected since sample result is "not detected" and recovery bias is on the high side for this compound.
MS-19	Sample to spike ratio is greater than or equal to 4:1. Spiked amount is not representative of the native amount in the sample. Appropriate or meaningful recoveries cannot be calculated.
MS-22	Either matrix spike or MS duplicate is outside of control limits, but the other is within limits. RPD between the two MS/MSD results is within method specified criteria.
O-32	A dilution was performed as part of the standard analytical procedure.
RL-08	Elevated reporting limit due to sample matrix interference. MA CAM reporting limit not met.
S-01	The surrogate recovery for this sample is not available due to sample dilution below the surrogate reporting limit required from high analyte concentration and/or matrix interferences.
V-05	Continuing calibration verification (CCV) did not meet method specifications and was biased on the low side for this compound.
V-16	Response factor is less than method specified minimum acceptable value. Reduced precision and accuracy may be associated with reported result.
V-20	Continuing calibration verification (CCV) 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.

**CERTIFICATIONS**

**Certified Analyses included in this Report**

Analyte	Certifications
<b>SW-846 1030 in Soil</b>	
Ignitability	NY,NH,CT,NC,ME,VA
<b>SW-846 6010D in Soil</b>	
Antimony	CT,NH,NY,ME,VA,NC
Arsenic	CT,NH,NY,ME,VA,NC
Barium	CT,NH,NY,ME,VA,NC
Beryllium	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
Nickel	CT,NH,NY,ME,VA,NC
Selenium	CT,NH,NY,ME,VA,NC
Silver	CT,NH,NY,ME,VA,NC
Thallium	CT,NH,NY,ME,VA,NC
Vanadium	CT,NH,NY,ME,VA,NC
Zinc	CT,NH,NY,ME,VA,NC
<b>SW-846 7471B in Soil</b>	
Mercury	CT,NH,NY,NC,ME,VA
<b>SW-846 8082A in Soil</b>	
Aroclor-1016	CT,NH,NY,ME,NC,VA
Aroclor-1016 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1221	CT,NH,NY,ME,NC,VA
Aroclor-1221 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1232	CT,NH,NY,ME,NC,VA
Aroclor-1232 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1242	CT,NH,NY,ME,NC,VA
Aroclor-1242 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1248	CT,NH,NY,ME,NC,VA
Aroclor-1248 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1254	CT,NH,NY,ME,NC,VA
Aroclor-1254 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1260	CT,NH,NY,ME,NC,VA
Aroclor-1260 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1262	NY,NC,VA
Aroclor-1262 [2C]	NY,NC,VA
Aroclor-1268	NY,NC,VA
Aroclor-1268 [2C]	NY,NC,VA
<b>SW-846 8260C in Soil</b>	
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

## CERTIFICATIONS

## Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8260C in Soil</i>	
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
1,2-Dibromo-3-chloropropane (DBCP)	NY
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
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

**CERTIFICATIONS**

**Certified Analyses included in this Report**

Analyte	Certifications
<b>SW-846 8260C in Soil</b>	
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
<b>SW-846 8270D in Soil</b>	
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
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

**CERTIFICATIONS**

**Certified Analyses included in this Report**

Analyte	Certifications
<b><i>SW-846 8270D in Soil</i></b>	
1,2-Diphenylhydrazine/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
2,4,5-Trichlorophenol	CT,NY,NH
2,4,6-Trichlorophenol	CT,NY,NH
<b><i>SW-846 8270D in Water</i></b>	
Acenaphthene	CT,NY,NH
Acenaphthylene	CT,NY,NH
Acetophenone	NY
Aniline	CT,NY
Anthracene	CT,NY,NH
Benzo(a)anthracene	CT,NY,NH
Benzo(a)pyrene	CT,NY,NH
Benzo(b)fluoranthene	CT,NY,NH
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



**CERTIFICATIONS**

**Certified Analyses included in this Report**

Analyte	Certifications
<i>SW-846 8270D in Water</i>	
1,2-Dichlorobenzene	CT,NY,NH
1,3-Dichlorobenzene	CT,NY,NH
1,4-Dichlorobenzene	CT,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/Azobenzene	NY
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
2,4,5-Trichlorophenol	CT,NY,NH
2,4,6-Trichlorophenol	CT,NY,NH

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

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

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2005	100033	03/1/2020
MA	Massachusetts DEP	M-MA100	06/30/2019
CT	Connecticut Department of Public Health	PH-0567	09/30/2019
NY	New York State Department of Health	10899 NELAP	04/1/2019
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2020
RI	Rhode Island Department of Health	LAO00112	12/30/2019
NC	North Carolina Div. of Water Quality	652	12/31/2019
NJ	New Jersey DEP	MA007 NELAP	06/30/2019
FL	Florida Department of Health	E871027 NELAP	06/30/2019
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2019
ME	State of Maine	2011028	06/9/2019
VA	Commonwealth of Virginia	460217	12/14/2019
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2019
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2019
NC-DW	North Carolina Department of Health	25703	07/31/2019

19C0480

JLH  
10707  
Address: 100 N Washington St, 302, Boston, MA  
Phone: 617-275-5407  
Project Location: MA  
Project Number: 46047  
Project Manager: K. Searson  
Con-Test Quote Name/Number:  
Invoice Recipient: K. Searson  
Sampled By: K. Searson

**Retention in Glass/Canister/Vial**  
7-Day  10-Day   
Due Date: 5-Day  
**Rush Approval Required**  
1-Day  3-Day   
2-Day  4-Day   
**Date Delivery**  
Format: PDF  EXCEL   
Other: EOD  
CLP Like Data Pkg Required:   
Email To: ksearson@vertek.org.com  
Fax To #:

Con-Test Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	Composite	Grab	Matrix Code	Conc Code	1	2	3	4	5	6	7	8	9	10	11	12	
1	TP-C3(0-5)	3/12/19	0740	X		S		X	X	X	X	X	X	X	X					
2	TP-C3(5-10)		0745																	
3	TP-D3(0-5)		0810																	
4	TP-D3(5-10)		0815																	
5	TP-D3(10-15)		0830																	
6	TP-E3(0-5)		0900																	
7	TP-E3(5-10)		0905																	
8	TP-F3(0-5)		0920																	
9	TP-F3(5-10)		0925																	
10	TP-E2(0-5)		1000																	

**ANALYSIS REQUESTED**

11PC 8260  
SNOC 8270  
TRH 8100  
MCP 14 METALS  
PCB 8082 Soxhlet  
lgg/Can/React/SPC

# of Containers  
Preservation Code  
Container Code  
**Dissolved Metal Sample**  
 Field Filtered  
 Lab to Filter  
**Organic Liquid Sample**  
 Field Filtered  
 Lab to Filter

**1 Matrix Codes:**  
GW = Ground Water  
WW = Waste Water  
DW = Drinking Water  
A = Air  
S = Soil  
SL = Sludge  
SOL = Solid  
O = Other (please define)

**2 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)

**3 Container Codes:**  
A = Amber Glass  
G = Glass  
P = Plastic  
ST = Sterile  
V = Vial  
S = Summa Canister  
T = Tedlar Bag  
O = Other (please define)

Comments:  
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: 03/12/19 1525  
Received by: (signature) [Signature] Date/Time: 3/12/19 1520  
Relinquished by: (signature) [Signature] Date/Time: 3/12/19 1815  
Received by: (signature) [Signature] Date/Time: 3/12/19 1815  
Relinquished by: (signature) [Signature] Date/Time: 4.0, 4.7  
Received by: (signature) [Signature] Date/Time:

**Detection Limit Requirements**  
MA   
CT   
Other   
**Special Requirements**  
 MA MCP Required  
 MCP Certification Form Required  
 CT RCP Required  
 RCP Certification Form Required  
 MA State DW Required  
PWSID #



RELAC and AIHA-LAP, LLC Accredited

**Project Entity**  
 Government  Municipality  MWRA  WRTA  
 Federal  21 J  School  
 City  Brownfield  MBTA  
**Other**  
 Chromatogram  
 AIHA-LAP, LLC  
**PCB ONLY**  
 Soxhlet  
 Non Soxhlet

Client Name: Verex  
Address: 600 N Washington St, 302 Boston MA  
Phone: 617-275-5957  
Project Name: 46047-Rivers Edge  
Project Location: MA  
Project Number: 46047  
Project Manager: K. Sarson  
Con-Test Quote Name/Number:  
Invoice Recipient: K. Sarson  
Sampled By: K. Sarson

**Requested Turnaround Time**  
7-Day  10-Day   
Due Date: 5-DAY

**Approval Required**  
1-Day  3-Day   
2-Day  4-Day

**Data Delivery**  
Format: PDF  EXCEL   
Other: CD  
CLP Like Data Pkg Required:   
Email To: ksarson@verex.org  
Fax To #:

Requested Turnaround Time	7-Day	10-Day	1-Day	3-Day	2-Day	4-Day
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**ANALYSIS REQUESTED**

DOC 8260  
SIOC 8270  
TPH 8100  
PCB 8082 w/ Soxhlet  
MCP 14 Metals  
log/Conc/React/Spec

# of Containers

<sup>2</sup> Preservation Code

<sup>3</sup> Container Code

**Dispersed Material Samples**

Field Filtered  
 Lab to Filter

**Drinking Water Samples**

Field Filtered  
 Lab to Filter

Con-Test Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	Composite	Grab	Matrix Code	Conc Code
11	TP-E2 (S-10)	3/12/19	1005	X		S	
12	TP-D2 (O-S)		1020				
13	TP-D2 (S-10)		1025				
14	TPC2 (O-S)		1050				
15	TP-C2 (S-10)		1055				
16	TP-D1 (O-S)		1145				
17	TP-D1 (S-10)		1150				
18	TP-C1 (O-S)		1210				
19	TP-C1 (S-10)		1215				
20	TP-B1 (O-S)		1240				

**1 Matrix Codes:**  
GW = Ground Water  
WW = Waste Water  
DW = Drinking Water  
A = Air  
S = Soil  
SL = Sludge  
SOL = Solid  
O = Other (please define)

**2 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)

**3 Container Codes:**  
A = Amber Glass  
G = Glass  
P = Plastic  
ST = Sterile  
V = Vial  
S = Summa Canister  
T = Tedlar Bag  
O = Other (please define)

Comments:

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: 03/12/19 1525

Received by: (signature) [Signature] Date/Time: 3/12/19 1525

Relinquished by: (signature) [Signature] Date/Time: 3/12/19 1815

Received by: (signature) [Signature] Date/Time: 3/12/19 1815

**Detection Limit Requirements**

MA

**Special Requirements**

MA MCP Required  
 MCP Certification Form Required  
 CT RCP Required  
 RCP Certification Form Required  
 MA State DW Required

PWSID #



NELAC and AIHA-LAP, LLC Accredited

Relinquished by: (signature) \_\_\_\_\_ Date/Time: \_\_\_\_\_

Received by: (signature) \_\_\_\_\_ Date/Time: \_\_\_\_\_

**Project Entity**

Government  Municipality  MWRA  WRTA  
 Federal  21 J  School  
 City  Brownfield  MBTA

**Other**

Chromatogram  
 AIHA-LAP, LLC

**PCB ONLY**

Soxhlet  
 Non Soxhlet



Phone: 413-525-2332  
 Fax: 413-525-6405  
 Email: info@contestlabs.com

http://www.contestlabs.com

Doc # 381 Rev 1\_03242017

CHAIN OF CUSTODY RECORD

39 Spruce Street  
 East Longmeadow, MA 01028

1460480

Address: **100 N Washington St, 302 Boston MA**  
 Phone: **617-275-5407**  
 Project Location: **MA**  
 Project Number: **46047**  
 Project Manager: **K. Sarsen**  
 Con-Test Quote Name/Number:  
 Invoice Recipient: **K. Sarsen**  
 Sampled By: **K. Sarsen**

**Requester Turnaround Time**  
 7-Day  10-Day   
 Due Date: **FRS DAY**

**Analysis Approval Required**  
 1-Day  3-Day   
 2-Day  4-Day

**Data Delivery**  
 Format: PDF  EXCEL   
 Other: **END**  
 CLP Like Data Pkg Required:   
 Email To: **ksarsen@vertek.org.am**  
 Fax To #:

Con-Test Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	Composite	Grab	Matrix Code	Conc Code	VOC 8260	SUPE 8270	TPH 8100	MCP 14 Metals	PCB 8082/Solvent	IGP/React/Conc/Spk
21	TP-B1(S-10)	3/12/19	1245	X		S		X	X	X	X	X	X
22	TP-B2(O-S)		1300					X	X	X	X	X	X
23	TP-B2(S-10)		1305					X	X	X	X	X	X
24	TP-A1(O-S)		1320					X	X	X	X	X	X
25	TP-A2(S-10)		1405					X	X	X	X	X	X
26	TP-A1(S-10)		1325					X	X	X	X	X	X
27	TP-A2(O-S)		1400	X				X	X	X	X	X	X

**Analysis Requested**

**Dissolved Metals Samples**  
 Field Filtered  
 Lab to Filter

**Organophosphorus Samples**  
 Field Filtered  
 Lab to Filter

**1 Matrix Codes:**  
 GW = Ground Water  
 WW = Waste Water  
 DW = Drinking Water  
 A = Air  
 S = Soil  
 SL = Sludge  
 SOL = Solid  
 O = Other (please define)

**2 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)

**3 Container Codes:**  
 A = Amber Glass  
 G = Glass  
 P = Plastic  
 ST = Sterile  
 V = Vial  
 S = Summa Canister  
 T = Tedlar Bag  
 O = Other (please define)

Con-Test Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	Composite	Grab	Matrix Code	Conc Code
21	TP-B1(S-10)	3/12/19	1245	X		S	
22	TP-B2(O-S)		1300				
23	TP-B2(S-10)		1305				
24	TP-A1(O-S)		1320				
25	TP-A2(S-10)		1405				
26	TP-A1(S-10)		1325				
27	TP-A2(O-S)		1400	X			

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

Comments:

Relinquished by: (signature) **[Signature]** Date/Time: **03/12/19 1525**

Received by: (signature) **[Signature]** Date/Time: **3/12/19 1525**

Relinquished by: (signature) **[Signature]** Date/Time: **3/12/19 1815**

Received by: (signature) **[Signature]** Date/Time: **3/12/19 18:15**

**Detection Limit Requirements**  
 MA

**Special Requirements**  
 MA MCP Required  
 MCP Certification Form Required  
 CT RCP Required  
 RCP Certification Form Required  
 MA State DW Required

Other: PWSID #



NETAC and AIHA-LAP, LLC Accredited

Relinquished by: (signature) \_\_\_\_\_ Date/Time: \_\_\_\_\_

Received by: (signature) \_\_\_\_\_ Date/Time: \_\_\_\_\_

**Project Entity**

Government  Municipality  MWRA  WRTA  
 Federal  21 J  School  
 City  Brownfield  MBTA

**Other**

Chromatogram  
 AIHA-LAP, LLC

**PCB ONLY**

Soxhlet  
 Non Soxhlet

I Have Not Confirmed Sample Container Numbers With Lab Staff Before Relinquishing Over Samples \_\_\_\_\_



**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 Vertex

Received By [Signature] Date 3/12/19 Time 18:15

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 # 5 Actual Temp - 4.0, 4.7  
 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 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? F Who was notified? \_\_\_\_\_

Are there Short Holds? T Who was notified? Miranda

Is there enough Volume? T

Is there Headspace where applicable? N/A 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? N/A Acid \_\_\_\_\_ Base \_\_\_\_\_

Vials	#	Containers:	#	#	#
Unp-		1 Liter Amb.		1 Liter Plastic	16 oz Amb.
HCL-		500 mL Amb.		500 mL Plastic	8oz Amb/Clear
Meoh-	<u>54, p27</u>	250 mL Amb.		250 mL Plastic	4oz Amb/Clear
Bisulfate-	<u>54</u>	Flashpoint		Col./Bacteria	2oz Amb/Clear
DI-		Other Glass		Other Plastic	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:**

Received 1 plastic bag for sample TP-F3(0-5) with analysis "Carb"

## MADEP MCP Analytical Method Report Certification Form

Laboratory Name: Con-Test Analytical Laboratory	Project #: 19C0480
Project Location: Wayland, MA	RTN:

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]  
19C0480-01 thru 19C0480-27

Matrices: Soil

**CAM Protocol (check all that below)**

8260 VOC CAM II A (X)	7470/7471 Hg CAM III B (X)	MassDEP VPH CAM IV A ( )	8082 PCB CAM V A (X)	9014 Total Cyanide/PAC CAM VI A ( )	6860 Perchlorate CAM VIII B ( )
8270 SVOC CAM II B (X)	7010 Metals CAM III C ( )	MassDEP VPH CAM IV C ( )	8081 Pesticides CAM V B ( )	7196 Hex Cr CAM VI B ( )	MassDEP APH CAM IX A ( )
6010 Metals CAM III A (X)	6020 Metals CAM III D ( )	MassDEP EPH CAM IV B ( )	8151 Herbicides CAM V C ( )	8330 Explosives CAM VIII A ( )	TO-15 VOC CAM IX B ( )

**Affirmative response to Questions A through F is required for "Presumptive Certainty" status**

<b>A</b>	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?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>B</b>	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>C</b>	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>D</b>	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?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>E a</b>	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).	<input type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>E b</b>	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	<input type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>F</b>	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)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>

**A response to questions G, H and I below is required for "Presumptive Certainty" status**

<b>G</b>	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <sup>1</sup>
----------	---	--

**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.**

<b>H</b>	Were all QC performance standards specified in the CAM protocol(s) achieved?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <sup>1</sup>
<b>I</b>	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>

<sup>1</sup>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: Lisa Worthington Position: Project Manager  
Printed Name: Lisa A. Worthington Date: 03/20/19

March 19, 2019

Kristen Sarson  
Vertex Engineering - Boston  
100 North Washington St. Suite 302  
Boston, MA 02114

Project Location: Wayland, MA  
Client Job Number:  
Project Number: 46047  
Laboratory Work Order Number: 19C0481

Enclosed are results of analyses for samples received by the laboratory on March 12, 2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, reading "Jessica Hoffman". The signature is written in a cursive style with a light blue background behind it.

Jessica L. Hoffman  
Project Manager



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

Vertex Engineering - Boston  
 100 North Washington St. Suite 302  
 Boston, MA 02114  
 ATTN: Kristen Sarson

REPORT DATE: 3/19/2019

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 46047

**ANALYTICAL SUMMARY**

WORK ORDER NUMBER: 19C0481

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

PROJECT LOCATION: Wayland, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
TP-V-101	19C0481-01	Soil		SM 2540G SM21-22 2510B Modified SW-846 1030 SW-846 6010D 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	
TP-V-102	19C0481-02	Soil		SM 2540G SM21-22 2510B Modified SW-846 1030 SW-846 6010D 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	
TP-V-103	19C0481-03	Soil		SM 2540G SM21-22 2510B Modified SW-846 1030 SW-846 6010D 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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Vertex Engineering - Boston  
 100 North Washington St. Suite 302  
 Boston, MA 02114  
 ATTN: Kristen Sarson

REPORT DATE: 3/19/2019

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 46047

**ANALYTICAL SUMMARY**

WORK ORDER NUMBER: 19C0481

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

PROJECT LOCATION: Wayland, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
TP-V-104	19C0481-04	Soil		SM 2540G SM21-22 2510B Modified SW-846 1030 SW-846 6010D 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	
TP-V-105	19C0481-05	Soil		SM 2540G SM21-22 2510B Modified SW-846 1030 SW-846 6010D 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	

**CASE NARRATIVE SUMMARY**

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

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SW-846 6010D

**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**  
19C0481-01[TP-V-101], 19C0481-02[TP-V-102], 19C0481-03[TP-V-103], 19C0481-04[TP-V-104], 19C0481-05[TP-V-105], B225677-MRL1

SW-846 8082A

**Qualifications:**

**O-32**  
A dilution was performed as part of the standard analytical procedure.

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

19C0481-01[TP-V-101], 19C0481-02[TP-V-102], 19C0481-03[TP-V-103], 19C0481-04[TP-V-104], 19C0481-05[TP-V-105]

SW-846 8100 Modified

**Qualifications:**

**MS-19**  
Sample to spike ratio is greater than or equal to 4:1. Spiked amount is not representative of the native amount in the sample. Appropriate or meaningful recoveries cannot be calculated.

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

**TPH (C9-C36)**  
B225791-MS1, B225791-MSD1

**S-01**  
The surrogate recovery for this sample is not available due to sample dilution below the surrogate reporting limit required from high analyte concentration and/or matrix interferences.

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

**2-Fluorobiphenyl**  
19C0481-01[TP-V-101], 19C0481-02[TP-V-102], 19C0481-03[TP-V-103], 19C0481-04[TP-V-104], B225791-MS1, B225791-MSD1

SW-846 8260C

**Qualifications:**

**V-05**  
Continuing calibration verification (CCV) did not meet method specifications and was biased on the low side for this compound.

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

**1,4-Dioxane**  
19C0481-01[TP-V-101], 19C0481-02[TP-V-102], 19C0481-03[TP-V-103], 19C0481-04[TP-V-104], 19C0481-05[TP-V-105], B225768-BLK1, B225768-BS1, B225768-BSD1, S033514-CCV1

**2,2-Dichloropropane**  
19C0481-01[TP-V-101], 19C0481-02[TP-V-102], 19C0481-03[TP-V-103], 19C0481-04[TP-V-104], 19C0481-05[TP-V-105], B225768-BLK1, B225768-BS1, B225768-BSD1, S033514-CCV1

**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**  
19C0481-01[TP-V-101], 19C0481-02[TP-V-102], 19C0481-03[TP-V-103], 19C0481-04[TP-V-104], 19C0481-05[TP-V-105], B225768-BLK1, B225768-BS1, B225768-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**  
19C0481-01[TP-V-101], 19C0481-02[TP-V-102], 19C0481-03[TP-V-103], 19C0481-04[TP-V-104], 19C0481-05[TP-V-105], B225768-BLK1, B225768-BS1, B225768-BSD1, S033514-CCV1

SW-846 8270D

**Qualifications:**

**RL-08**

Elevated reporting limit due to sample matrix interference. MA CAM reporting limit not met.

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

19C0481-01[TP-V-101], 19C0481-02[TP-V-102], 19C0481-04[TP-V-104]

**V-05**

Continuing calibration verification (CCV) did not meet method specifications and was biased on the low side for this compound.

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

19C0481-01[TP-V-101], 19C0481-02[TP-V-102], 19C0481-03[TP-V-103], 19C0481-04[TP-V-104], 19C0481-05[TP-V-105], S033582-CCV1

**Pentachlorophenol**

19C0481-01[TP-V-101], 19C0481-02[TP-V-102], 19C0481-03[TP-V-103], 19C0481-04[TP-V-104], 19C0481-05[TP-V-105], S033582-CCV1

**V-06**

Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side for this compound.

**Analyte & Samples(s) Qualified:****Di-n-octylphthalate**

S033582-CCV1

**V-20**

Continuing calibration verification (CCV) 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:****Di-n-octylphthalate**

19C0481-01[TP-V-101], 19C0481-02[TP-V-102], 19C0481-03[TP-V-103], 19C0481-04[TP-V-104], 19C0481-05[TP-V-105]

**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:****4-Chloroaniline**

19C0481-01[TP-V-101], 19C0481-02[TP-V-102], 19C0481-03[TP-V-103], 19C0481-04[TP-V-104], 19C0481-05[TP-V-105], B225793-BLK1, B225793-BS1, B225793-BSD1, S033571-CCV1, S033582-CCV1

**Aniline**

19C0481-01[TP-V-101], 19C0481-02[TP-V-102], 19C0481-03[TP-V-103], 19C0481-04[TP-V-104], 19C0481-05[TP-V-105], B225793-BLK1, B225793-BS1, B225793-BSD1, S033571-CCV1, S033582-CCV1

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**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: Wayland, MA

Sample Description:

Work Order: 19C0481

Date Received: 3/12/2019

Field Sample #: TP-V-101

Sampled: 3/12/2019 14:30

Sample ID: 19C0481-01

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.080	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:08	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00080	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:08	MFF
Benzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:08	MFF
Bromobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:08	MFF
Bromochloromethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:08	MFF
Bromodichloromethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:08	MFF
Bromoform	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:08	MFF
Bromomethane	ND	0.0080	mg/Kg dry	1	V-34	SW-846 8260C	3/14/19	3/14/19 23:08	MFF
2-Butanone (MEK)	ND	0.032	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:08	MFF
n-Butylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:08	MFF
sec-Butylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:08	MFF
tert-Butylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:08	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00080	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:08	MFF
Carbon Disulfide	ND	0.0048	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:08	MFF
Carbon Tetrachloride	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:08	MFF
Chlorobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:08	MFF
Chlorodibromomethane	ND	0.00080	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:08	MFF
Chloroethane	ND	0.0080	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:08	MFF
Chloroform	ND	0.0032	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:08	MFF
Chloromethane	ND	0.0080	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:08	MFF
2-Chlorotoluene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:08	MFF
4-Chlorotoluene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:08	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0032	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:08	MFF
1,2-Dibromoethane (EDB)	ND	0.00080	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:08	MFF
Dibromomethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:08	MFF
1,2-Dichlorobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:08	MFF
1,3-Dichlorobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:08	MFF
1,4-Dichlorobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:08	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0080	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:08	MFF
1,1-Dichloroethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:08	MFF
1,2-Dichloroethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:08	MFF
1,1-Dichloroethylene	ND	0.0032	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:08	MFF
cis-1,2-Dichloroethylene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:08	MFF
trans-1,2-Dichloroethylene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:08	MFF
1,2-Dichloropropane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:08	MFF
1,3-Dichloropropane	ND	0.00080	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:08	MFF
2,2-Dichloropropane	ND	0.0016	mg/Kg dry	1	V-05	SW-846 8260C	3/14/19	3/14/19 23:08	MFF
1,1-Dichloropropene	ND	0.0032	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:08	MFF
cis-1,3-Dichloropropene	ND	0.00080	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:08	MFF
trans-1,3-Dichloropropene	ND	0.00080	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:08	MFF
Diethyl Ether	ND	0.0080	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:08	MFF
Diisopropyl Ether (DIPE)	ND	0.00080	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:08	MFF
1,4-Dioxane	ND	0.16	mg/Kg dry	1	V-05, V-16	SW-846 8260C	3/14/19	3/14/19 23:08	MFF
Ethylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:08	MFF

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0481

Date Received: 3/12/2019

Field Sample #: TP-V-101

Sampled: 3/12/2019 14:30

Sample ID: 19C0481-01

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:08	MFF
2-Hexanone (MBK)	ND	0.016	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:08	MFF
Isopropylbenzene (Cumene)	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:08	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:08	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0032	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:08	MFF
Methylene Chloride	ND	0.0080	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:08	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.016	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:08	MFF
Naphthalene	ND	0.0032	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:08	MFF
n-Propylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:08	MFF
Styrene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:08	MFF
1,1,1,2-Tetrachloroethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:08	MFF
1,1,2,2-Tetrachloroethane	ND	0.00080	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:08	MFF
Tetrachloroethylene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:08	MFF
Tetrahydrofuran	ND	0.0080	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:08	MFF
Toluene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:08	MFF
1,2,3-Trichlorobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:08	MFF
1,2,4-Trichlorobenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:08	MFF
1,1,1-Trichloroethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:08	MFF
1,1,2-Trichloroethane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:08	MFF
Trichloroethylene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:08	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0080	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:08	MFF
1,2,3-Trichloropropane	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:08	MFF
1,2,4-Trimethylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:08	MFF
1,3,5-Trimethylbenzene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:08	MFF
Vinyl Chloride	ND	0.0080	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:08	MFF
m+p Xylene	ND	0.0032	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:08	MFF
o-Xylene	ND	0.0016	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:08	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	93.2	70-130	3/14/19 23:08
Toluene-d8	97.2	70-130	3/14/19 23:08
4-Bromofluorobenzene	96.3	70-130	3/14/19 23:08

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0481

Date Received: 3/12/2019

Field Sample #: TP-V-101

Sampled: 3/12/2019 14:30

Sample ID: 19C0481-01

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatle Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.75	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 18:15	IMR
Acenaphthylene	ND	0.75	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 18:15	IMR
Acetophenone	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 18:15	IMR
Aniline	ND	1.5	mg/Kg dry	4	V-34	SW-846 8270D	3/14/19	3/15/19 18:15	IMR
Anthracene	ND	0.75	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 18:15	IMR
Benzo(a)anthracene	1.2	0.75	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 18:15	IMR
Benzo(a)pyrene	1.3	0.75	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 18:15	IMR
Benzo(b)fluoranthene	1.4	0.75	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 18:15	IMR
Benzo(g,h,i)perylene	ND	0.75	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 18:15	IMR
Benzo(k)fluoranthene	ND	0.75	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 18:15	IMR
Bis(2-chloroethoxy)methane	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 18:15	IMR
Bis(2-chloroethyl)ether	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 18:15	IMR
Bis(2-chloroisopropyl)ether	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 18:15	IMR
Bis(2-Ethylhexyl)phthalate	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 18:15	IMR
4-Bromophenylphenylether	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 18:15	IMR
Butylbenzylphthalate	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 18:15	IMR
4-Chloroaniline	ND	2.9	mg/Kg dry	4	V-34	SW-846 8270D	3/14/19	3/15/19 18:15	IMR
2-Chloronaphthalene	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 18:15	IMR
2-Chlorophenol	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 18:15	IMR
Chrysene	1.1	0.75	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 18:15	IMR
Dibenz(a,h)anthracene	ND	0.75	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 18:15	IMR
Dibenzofuran	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 18:15	IMR
Di-n-butylphthalate	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 18:15	IMR
1,2-Dichlorobenzene	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 18:15	IMR
1,3-Dichlorobenzene	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 18:15	IMR
1,4-Dichlorobenzene	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 18:15	IMR
3,3-Dichlorobenzidine	ND	0.75	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 18:15	IMR
2,4-Dichlorophenol	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 18:15	IMR
Diethylphthalate	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 18:15	IMR
2,4-Dimethylphenol	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 18:15	IMR
Dimethylphthalate	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 18:15	IMR
2,4-Dinitrophenol	ND	2.9	mg/Kg dry	4	V-05	SW-846 8270D	3/14/19	3/15/19 18:15	IMR
2,4-Dinitrotoluene	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 18:15	IMR
2,6-Dinitrotoluene	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 18:15	IMR
Di-n-octylphthalate	ND	1.5	mg/Kg dry	4	V-20	SW-846 8270D	3/14/19	3/15/19 18:15	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 18:15	IMR
Fluoranthene	2.0	0.75	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 18:15	IMR
Fluorene	ND	0.75	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 18:15	IMR
Hexachlorobenzene	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 18:15	IMR
Hexachlorobutadiene	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 18:15	IMR
Hexachloroethane	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 18:15	IMR
Indeno(1,2,3-cd)pyrene	0.86	0.75	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 18:15	IMR
Isophorone	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 18:15	IMR
2-Methylnaphthalene	ND	0.75	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 18:15	IMR

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19C0481

Date Received: 3/12/2019

Field Sample #: TP-V-101

Sampled: 3/12/2019 14:30

Sample ID: 19C0481-01

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 18:15	IMR
3/4-Methylphenol	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 18:15	IMR
Naphthalene	ND	0.75	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 18:15	IMR
Nitrobenzene	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 18:15	IMR
2-Nitrophenol	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 18:15	IMR
4-Nitrophenol	ND	2.9	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 18:15	IMR
Pentachlorophenol	ND	1.5	mg/Kg dry	4	V-05	SW-846 8270D	3/14/19	3/15/19 18:15	IMR
Phenanthrene	1.1	0.75	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 18:15	IMR
Phenol	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 18:15	IMR
Pyrene	2.2	0.75	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 18:15	IMR
1,2,4-Trichlorobenzene	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 18:15	IMR
2,4,5-Trichlorophenol	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 18:15	IMR
2,4,6-Trichlorophenol	ND	1.5	mg/Kg dry	4		SW-846 8270D	3/14/19	3/15/19 18:15	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	58.1	30-130	
Phenol-d6	62.3	30-130	
Nitrobenzene-d5	69.5	30-130	
2-Fluorobiphenyl	61.5	30-130	
2,4,6-Tribromophenol	64.5	30-130	
p-Terphenyl-d14	79.0	30-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0481

Date Received: 3/12/2019

Field Sample #: TP-V-101

Sampled: 3/12/2019 14:30

Sample ID: 19C0481-01

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 14:52	TG
Aroclor-1221 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 14:52	TG
Aroclor-1232 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 14:52	TG
Aroclor-1242 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 14:52	TG
Aroclor-1248 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 14:52	TG
Aroclor-1254 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 14:52	TG
Aroclor-1260 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 14:52	TG
Aroclor-1262 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 14:52	TG
Aroclor-1268 [1]	ND	0.083	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 14:52	TG
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		95.3	30-150					3/18/19 14:52	
Decachlorobiphenyl [2]		94.2	30-150					3/18/19 14:52	
Tetrachloro-m-xylene [1]		109	30-150					3/18/19 14:52	
Tetrachloro-m-xylene [2]		106	30-150					3/18/19 14:52	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0481

Date Received: 3/12/2019

Sampled: 3/12/2019 14:30

Field Sample #: TP-V-101

Sample ID: 19C0481-01

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	500	180	mg/Kg dry	20		SW-846 8100 Modified	3/14/19	3/15/19 23:35	KLB
<b>Surrogates</b>		<b>% Recovery</b>	<b>Recovery Limits</b>		<b>Flag/Qual</b>				
2-Fluorobiphenyl		*	40-140		S-01			3/15/19 23:35	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0481

Date Received: 3/12/2019

Field Sample #: TP-V-101

Sampled: 3/12/2019 14:30

Sample ID: 19C0481-01

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.8	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 16:17	QNW
Arsenic	4.3	1.8	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 16:17	QNW
Barium	25	1.8	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 16:17	QNW
Beryllium	0.31	0.18	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 16:17	QNW
Cadmium	0.26	0.18	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 16:17	QNW
Chromium	13	0.36	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 16:17	QNW
Lead	18	0.54	mg/Kg dry	1	M-10	SW-846 6010D	3/13/19	3/14/19 16:17	QNW
Mercury	ND	0.027	mg/Kg dry	1		SW-846 7471B	3/13/19	3/15/19 13:36	TBC
Nickel	11	0.36	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 16:17	QNW
Selenium	ND	3.6	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 16:17	QNW
Silver	ND	0.36	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 15:11	QNW
Thallium	ND	1.8	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 16:17	QNW
Vanadium	22	0.72	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 16:17	QNW
Zinc	32	0.72	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 16:17	QNW

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0481

Date Received: 3/12/2019

Field Sample #: TP-V-101

Sampled: 3/12/2019 14:30

Sample ID: 19C0481-01

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	88.7		% Wt	1		SM 2540G	3/13/19	3/14/19 6:40	VLH
Ignitability	Absent		present/absent	1		SW-846 1030	3/17/19	3/17/19 12:20	KMV
pH @21.3°C	7.7		pH Units	1		SW-846 9045C	3/12/19	3/12/19 20:38	AIA
Reactive Cyanide	ND	4.0	mg/Kg	1		SW-846 9014	3/14/19	3/15/19 11:07	KMV
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	3/14/19	3/15/19 10:28	KMV
Specific conductance	14	2.0	µmhos/cm	1		SM21-22 2510B Modified	3/16/19	3/16/19 13:31	EC



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0481

Date Received: 3/12/2019

Field Sample #: TP-V-102

Sampled: 3/12/2019 14:35

Sample ID: 19C0481-02

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.086	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:35	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00086	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:35	MFF
Benzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:35	MFF
Bromobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:35	MFF
Bromochloromethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:35	MFF
Bromodichloromethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:35	MFF
Bromoform	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:35	MFF
Bromomethane	ND	0.0086	mg/Kg dry	1	V-34	SW-846 8260C	3/14/19	3/14/19 23:35	MFF
2-Butanone (MEK)	ND	0.034	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:35	MFF
n-Butylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:35	MFF
sec-Butylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:35	MFF
tert-Butylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:35	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00086	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:35	MFF
Carbon Disulfide	ND	0.0052	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:35	MFF
Carbon Tetrachloride	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:35	MFF
Chlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:35	MFF
Chlorodibromomethane	ND	0.00086	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:35	MFF
Chloroethane	ND	0.0086	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:35	MFF
Chloroform	ND	0.0034	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:35	MFF
Chloromethane	ND	0.0086	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:35	MFF
2-Chlorotoluene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:35	MFF
4-Chlorotoluene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:35	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0034	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:35	MFF
1,2-Dibromoethane (EDB)	ND	0.00086	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:35	MFF
Dibromomethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:35	MFF
1,2-Dichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:35	MFF
1,3-Dichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:35	MFF
1,4-Dichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:35	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0086	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:35	MFF
1,1-Dichloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:35	MFF
1,2-Dichloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:35	MFF
1,1-Dichloroethylene	ND	0.0034	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:35	MFF
cis-1,2-Dichloroethylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:35	MFF
trans-1,2-Dichloroethylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:35	MFF
1,2-Dichloropropane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:35	MFF
1,3-Dichloropropane	ND	0.00086	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:35	MFF
2,2-Dichloropropane	ND	0.0017	mg/Kg dry	1	V-05	SW-846 8260C	3/14/19	3/14/19 23:35	MFF
1,1-Dichloropropene	ND	0.0034	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:35	MFF
cis-1,3-Dichloropropene	ND	0.00086	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:35	MFF
trans-1,3-Dichloropropene	ND	0.00086	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:35	MFF
Diethyl Ether	ND	0.0086	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:35	MFF
Diisopropyl Ether (DIPE)	ND	0.00086	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:35	MFF
1,4-Dioxane	ND	0.17	mg/Kg dry	1	V-05, V-16	SW-846 8260C	3/14/19	3/14/19 23:35	MFF
Ethylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:35	MFF

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0481

Date Received: 3/12/2019

Field Sample #: TP-V-102

Sampled: 3/12/2019 14:35

Sample ID: 19C0481-02

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:35	MFF
2-Hexanone (MBK)	ND	0.017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:35	MFF
Isopropylbenzene (Cumene)	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:35	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:35	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0034	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:35	MFF
Methylene Chloride	ND	0.0086	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:35	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:35	MFF
Naphthalene	ND	0.0034	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:35	MFF
n-Propylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:35	MFF
Styrene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:35	MFF
1,1,1,2-Tetrachloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:35	MFF
1,1,2,2-Tetrachloroethane	ND	0.00086	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:35	MFF
Tetrachloroethylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:35	MFF
Tetrahydrofuran	ND	0.0086	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:35	MFF
Toluene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:35	MFF
1,2,3-Trichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:35	MFF
1,2,4-Trichlorobenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:35	MFF
1,1,1-Trichloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:35	MFF
1,1,2-Trichloroethane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:35	MFF
Trichloroethylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:35	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0086	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:35	MFF
1,2,3-Trichloropropane	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:35	MFF
1,2,4-Trimethylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:35	MFF
1,3,5-Trimethylbenzene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:35	MFF
Vinyl Chloride	ND	0.0086	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:35	MFF
m+p Xylene	ND	0.0034	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:35	MFF
o-Xylene	ND	0.0017	mg/Kg dry	1		SW-846 8260C	3/14/19	3/14/19 23:35	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	93.8	70-130	
Toluene-d8	96.0	70-130	
4-Bromofluorobenzene	97.9	70-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0481

Date Received: 3/12/2019

Field Sample #: TP-V-102

Sampled: 3/12/2019 14:35

Sample ID: 19C0481-02

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.93	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 18:41	IMR
Acenaphthylene	ND	0.93	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 18:41	IMR
Acetophenone	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 18:41	IMR
Aniline	ND	1.9	mg/Kg dry	5	V-34	SW-846 8270D	3/14/19	3/15/19 18:41	IMR
Anthracene	ND	0.93	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 18:41	IMR
Benzo(a)anthracene	1.3	0.93	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 18:41	IMR
Benzo(a)pyrene	1.2	0.93	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 18:41	IMR
Benzo(b)fluoranthene	1.4	0.93	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 18:41	IMR
Benzo(g,h,i)perylene	ND	0.93	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 18:41	IMR
Benzo(k)fluoranthene	ND	0.93	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 18:41	IMR
Bis(2-chloroethoxy)methane	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 18:41	IMR
Bis(2-chloroethyl)ether	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 18:41	IMR
Bis(2-chloroisopropyl)ether	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 18:41	IMR
Bis(2-Ethylhexyl)phthalate	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 18:41	IMR
4-Bromophenylphenylether	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 18:41	IMR
Butylbenzylphthalate	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 18:41	IMR
4-Chloroaniline	ND	3.6	mg/Kg dry	5	V-34	SW-846 8270D	3/14/19	3/15/19 18:41	IMR
2-Chloronaphthalene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 18:41	IMR
2-Chlorophenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 18:41	IMR
Chrysene	1.2	0.93	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 18:41	IMR
Dibenz(a,h)anthracene	ND	0.93	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 18:41	IMR
Dibenzofuran	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 18:41	IMR
Di-n-butylphthalate	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 18:41	IMR
1,2-Dichlorobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 18:41	IMR
1,3-Dichlorobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 18:41	IMR
1,4-Dichlorobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 18:41	IMR
3,3-Dichlorobenzidine	ND	0.93	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 18:41	IMR
2,4-Dichlorophenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 18:41	IMR
Diethylphthalate	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 18:41	IMR
2,4-Dimethylphenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 18:41	IMR
Dimethylphthalate	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 18:41	IMR
2,4-Dinitrophenol	ND	3.6	mg/Kg dry	5	V-05	SW-846 8270D	3/14/19	3/15/19 18:41	IMR
2,4-Dinitrotoluene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 18:41	IMR
2,6-Dinitrotoluene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 18:41	IMR
Di-n-octylphthalate	ND	1.9	mg/Kg dry	5	V-20	SW-846 8270D	3/14/19	3/15/19 18:41	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 18:41	IMR
Fluoranthene	2.2	0.93	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 18:41	IMR
Fluorene	ND	0.93	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 18:41	IMR
Hexachlorobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 18:41	IMR
Hexachlorobutadiene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 18:41	IMR
Hexachloroethane	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 18:41	IMR
Indeno(1,2,3-cd)pyrene	ND	0.93	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 18:41	IMR
Isophorone	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 18:41	IMR
2-Methylnaphthalene	ND	0.93	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 18:41	IMR

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0481

Date Received: 3/12/2019

Field Sample #: TP-V-102

Sampled: 3/12/2019 14:35

Sample ID: 19C0481-02

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 18:41	IMR
3/4-Methylphenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 18:41	IMR
Naphthalene	ND	0.93	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 18:41	IMR
Nitrobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 18:41	IMR
2-Nitrophenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 18:41	IMR
4-Nitrophenol	ND	3.6	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 18:41	IMR
Pentachlorophenol	ND	1.9	mg/Kg dry	5	V-05	SW-846 8270D	3/14/19	3/15/19 18:41	IMR
Phenanthrene	ND	0.93	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 18:41	IMR
Phenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 18:41	IMR
Pyrene	2.5	0.93	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 18:41	IMR
1,2,4-Trichlorobenzene	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 18:41	IMR
2,4,5-Trichlorophenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 18:41	IMR
2,4,6-Trichlorophenol	ND	1.9	mg/Kg dry	5		SW-846 8270D	3/14/19	3/15/19 18:41	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	79.4	30-130	
Phenol-d6	84.8	30-130	
Nitrobenzene-d5	88.9	30-130	
2-Fluorobiphenyl	75.1	30-130	
2,4,6-Tribromophenol	74.2	30-130	
p-Terphenyl-d14	91.2	30-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0481

Date Received: 3/12/2019

Field Sample #: TP-V-102

Sampled: 3/12/2019 14:35

Sample ID: 19C0481-02

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.088	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 15:09	TG
Aroclor-1221 [1]	ND	0.088	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 15:09	TG
Aroclor-1232 [1]	ND	0.088	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 15:09	TG
Aroclor-1242 [1]	ND	0.088	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 15:09	TG
Aroclor-1248 [1]	ND	0.088	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 15:09	TG
Aroclor-1254 [1]	ND	0.088	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 15:09	TG
Aroclor-1260 [1]	ND	0.088	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 15:09	TG
Aroclor-1262 [1]	ND	0.088	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 15:09	TG
Aroclor-1268 [1]	ND	0.088	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 15:09	TG
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		95.0	30-150					3/18/19 15:09	
Decachlorobiphenyl [2]		89.5	30-150					3/18/19 15:09	
Tetrachloro-m-xylene [1]		111	30-150					3/18/19 15:09	
Tetrachloro-m-xylene [2]		108	30-150					3/18/19 15:09	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0481

Date Received: 3/12/2019

Sampled: 3/12/2019 14:35

Field Sample #: TP-V-102

Sample ID: 19C0481-02

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	3100	460	mg/Kg dry	50		SW-846 8100 Modified	3/14/19	3/16/19 1:56	KLB
<b>Surrogates</b>		<b>% Recovery</b>	<b>Recovery Limits</b>		<b>Flag/Qual</b>				
2-Fluorobiphenyl		*	40-140		S-01			3/16/19 1:56	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0481

Date Received: 3/12/2019

Sampled: 3/12/2019 14:35

Field Sample #: TP-V-102

Sample ID: 19C0481-02

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.8	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 16:22	QNW
Arsenic	5.3	1.8	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 16:22	QNW
Barium	42	1.8	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 16:22	QNW
Beryllium	0.33	0.18	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 16:22	QNW
Cadmium	0.38	0.18	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 16:22	QNW
Chromium	17	0.37	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 16:22	QNW
Lead	31	0.55	mg/Kg dry	1	M-10	SW-846 6010D	3/13/19	3/14/19 16:22	QNW
Mercury	0.034	0.028	mg/Kg dry	1		SW-846 7471B	3/13/19	3/15/19 13:37	TBC
Nickel	14	0.37	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 16:22	QNW
Selenium	ND	3.7	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 16:22	QNW
Silver	ND	0.37	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 15:16	QNW
Thallium	ND	1.8	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 16:22	QNW
Vanadium	26	0.73	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 16:22	QNW
Zinc	42	0.73	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 16:22	QNW

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0481

Date Received: 3/12/2019

Sampled: 3/12/2019 14:35

Field Sample #: TP-V-102

Sample ID: 19C0481-02

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	89.1		% Wt	1		SM 2540G	3/13/19	3/14/19 6:40	VLH
Ignitability	Absent		present/absent	1		SW-846 1030	3/17/19	3/17/19 12:20	KMV
pH @20.5°C	8.1		pH Units	1		SW-846 9045C	3/12/19	3/12/19 20:38	AIA
Reactive Cyanide	ND	3.9	mg/Kg	1		SW-846 9014	3/14/19	3/15/19 11:07	KMV
Reactive Sulfide	ND	19	mg/Kg	1		SW-846 9030A	3/14/19	3/15/19 10:28	KMV
Specific conductance	23	2.0	µmhos/cm	1		SM21-22 2510B Modified	3/16/19	3/16/19 13:31	EC



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0481

Date Received: 3/12/2019

Field Sample #: TP-V-103

Sampled: 3/12/2019 14:40

Sample ID: 19C0481-03

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.14	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:02	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.0014	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:02	MFF
Benzene	ND	0.0028	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:02	MFF
Bromobenzene	ND	0.0028	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:02	MFF
Bromochloromethane	ND	0.0028	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:02	MFF
Bromodichloromethane	ND	0.0028	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:02	MFF
Bromoform	ND	0.0028	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:02	MFF
Bromomethane	ND	0.014	mg/Kg dry	1	V-34	SW-846 8260C	3/14/19	3/15/19 0:02	MFF
2-Butanone (MEK)	ND	0.056	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:02	MFF
n-Butylbenzene	ND	0.0028	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:02	MFF
sec-Butylbenzene	ND	0.0028	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:02	MFF
tert-Butylbenzene	ND	0.0028	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:02	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.0014	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:02	MFF
Carbon Disulfide	ND	0.0084	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:02	MFF
Carbon Tetrachloride	ND	0.0028	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:02	MFF
Chlorobenzene	ND	0.0028	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:02	MFF
Chlorodibromomethane	ND	0.0014	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:02	MFF
Chloroethane	ND	0.014	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:02	MFF
Chloroform	ND	0.0056	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:02	MFF
Chloromethane	ND	0.014	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:02	MFF
2-Chlorotoluene	ND	0.0028	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:02	MFF
4-Chlorotoluene	ND	0.0028	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:02	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0056	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:02	MFF
1,2-Dibromoethane (EDB)	ND	0.0014	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:02	MFF
Dibromomethane	ND	0.0028	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:02	MFF
1,2-Dichlorobenzene	ND	0.0028	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:02	MFF
1,3-Dichlorobenzene	ND	0.0028	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:02	MFF
1,4-Dichlorobenzene	ND	0.0028	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:02	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.014	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:02	MFF
1,1-Dichloroethane	ND	0.0028	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:02	MFF
1,2-Dichloroethane	ND	0.0028	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:02	MFF
1,1-Dichloroethylene	ND	0.0056	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:02	MFF
cis-1,2-Dichloroethylene	ND	0.0028	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:02	MFF
trans-1,2-Dichloroethylene	ND	0.0028	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:02	MFF
1,2-Dichloropropane	ND	0.0028	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:02	MFF
1,3-Dichloropropane	ND	0.0014	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:02	MFF
2,2-Dichloropropane	ND	0.0028	mg/Kg dry	1	V-05	SW-846 8260C	3/14/19	3/15/19 0:02	MFF
1,1-Dichloropropene	ND	0.0056	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:02	MFF
cis-1,3-Dichloropropene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:02	MFF
trans-1,3-Dichloropropene	ND	0.0014	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:02	MFF
Diethyl Ether	ND	0.014	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:02	MFF
Diisopropyl Ether (DIPE)	ND	0.0014	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:02	MFF
1,4-Dioxane	ND	0.28	mg/Kg dry	1	V-05, V-16	SW-846 8260C	3/14/19	3/15/19 0:02	MFF
Ethylbenzene	ND	0.0028	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:02	MFF

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19C0481

Date Received: 3/12/2019

Field Sample #: TP-V-103

Sampled: 3/12/2019 14:40

Sample ID: 19C0481-03

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0028	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:02	MFF
2-Hexanone (MBK)	ND	0.028	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:02	MFF
Isopropylbenzene (Cumene)	ND	0.0028	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:02	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0028	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:02	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0056	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:02	MFF
Methylene Chloride	ND	0.014	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:02	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.028	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:02	MFF
Naphthalene	ND	0.0056	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:02	MFF
n-Propylbenzene	ND	0.0028	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:02	MFF
Styrene	ND	0.0028	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:02	MFF
1,1,1,2-Tetrachloroethane	ND	0.0028	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:02	MFF
1,1,2,2-Tetrachloroethane	ND	0.0014	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:02	MFF
Tetrachloroethylene	ND	0.0028	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:02	MFF
Tetrahydrofuran	ND	0.014	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:02	MFF
Toluene	ND	0.0028	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:02	MFF
1,2,3-Trichlorobenzene	ND	0.0028	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:02	MFF
1,2,4-Trichlorobenzene	ND	0.0028	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:02	MFF
1,1,1-Trichloroethane	ND	0.0028	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:02	MFF
1,1,2-Trichloroethane	ND	0.0028	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:02	MFF
Trichloroethylene	ND	0.0028	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:02	MFF
Trichlorofluoromethane (Freon 11)	ND	0.014	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:02	MFF
1,2,3-Trichloropropane	ND	0.0028	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:02	MFF
1,2,4-Trimethylbenzene	ND	0.0028	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:02	MFF
1,3,5-Trimethylbenzene	ND	0.0028	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:02	MFF
Vinyl Chloride	ND	0.014	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:02	MFF
m+p Xylene	ND	0.0056	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:02	MFF
o-Xylene	ND	0.0028	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:02	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	90.5	70-130	
Toluene-d8	98.9	70-130	
4-Bromofluorobenzene	99.7	70-130	

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19C0481

Date Received: 3/12/2019

Field Sample #: TP-V-103

Sampled: 3/12/2019 14:40

Sample ID: 19C0481-03

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.20	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:06	IMR
Acenaphthylene	ND	0.20	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:06	IMR
Acetophenone	ND	0.41	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:06	IMR
Aniline	ND	0.41	mg/Kg dry	1	V-34	SW-846 8270D	3/14/19	3/15/19 19:06	IMR
Anthracene	ND	0.20	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:06	IMR
Benzo(a)anthracene	0.22	0.20	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:06	IMR
Benzo(a)pyrene	0.24	0.20	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:06	IMR
Benzo(b)fluoranthene	0.26	0.20	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:06	IMR
Benzo(g,h,i)perylene	ND	0.20	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:06	IMR
Benzo(k)fluoranthene	ND	0.20	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:06	IMR
Bis(2-chloroethoxy)methane	ND	0.41	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:06	IMR
Bis(2-chloroethyl)ether	ND	0.41	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:06	IMR
Bis(2-chloroisopropyl)ether	ND	0.41	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:06	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.41	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:06	IMR
4-Bromophenylphenylether	ND	0.41	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:06	IMR
Butylbenzylphthalate	ND	0.41	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:06	IMR
4-Chloroaniline	ND	0.79	mg/Kg dry	1	V-34	SW-846 8270D	3/14/19	3/15/19 19:06	IMR
2-Chloronaphthalene	ND	0.41	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:06	IMR
2-Chlorophenol	ND	0.41	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:06	IMR
Chrysene	ND	0.20	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:06	IMR
Dibenz(a,h)anthracene	ND	0.20	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:06	IMR
Dibenzofuran	ND	0.41	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:06	IMR
Di-n-butylphthalate	ND	0.41	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:06	IMR
1,2-Dichlorobenzene	ND	0.41	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:06	IMR
1,3-Dichlorobenzene	ND	0.41	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:06	IMR
1,4-Dichlorobenzene	ND	0.41	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:06	IMR
3,3-Dichlorobenzidine	ND	0.20	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:06	IMR
2,4-Dichlorophenol	ND	0.41	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:06	IMR
Diethylphthalate	ND	0.41	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:06	IMR
2,4-Dimethylphenol	ND	0.41	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:06	IMR
Dimethylphthalate	ND	0.41	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:06	IMR
2,4-Dinitrophenol	ND	0.79	mg/Kg dry	1	V-05	SW-846 8270D	3/14/19	3/15/19 19:06	IMR
2,4-Dinitrotoluene	ND	0.41	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:06	IMR
2,6-Dinitrotoluene	ND	0.41	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:06	IMR
Di-n-octylphthalate	ND	0.41	mg/Kg dry	1	V-20	SW-846 8270D	3/14/19	3/15/19 19:06	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.41	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:06	IMR
Fluoranthene	0.41	0.20	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:06	IMR
Fluorene	ND	0.20	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:06	IMR
Hexachlorobenzene	ND	0.41	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:06	IMR
Hexachlorobutadiene	ND	0.41	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:06	IMR
Hexachloroethane	ND	0.41	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:06	IMR
Indeno(1,2,3-cd)pyrene	ND	0.20	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:06	IMR
Isophorone	ND	0.41	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:06	IMR
2-Methylnaphthalene	ND	0.20	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:06	IMR

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19C0481

Date Received: 3/12/2019

Field Sample #: TP-V-103

Sampled: 3/12/2019 14:40

Sample ID: 19C0481-03

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	0.41	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:06	IMR
3/4-Methylphenol	ND	0.41	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:06	IMR
Naphthalene	ND	0.20	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:06	IMR
Nitrobenzene	ND	0.41	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:06	IMR
2-Nitrophenol	ND	0.41	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:06	IMR
4-Nitrophenol	ND	0.79	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:06	IMR
Pentachlorophenol	ND	0.41	mg/Kg dry	1	V-05	SW-846 8270D	3/14/19	3/15/19 19:06	IMR
Phenanthrene	0.21	0.20	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:06	IMR
Phenol	ND	0.41	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:06	IMR
Pyrene	0.42	0.20	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:06	IMR
1,2,4-Trichlorobenzene	ND	0.41	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:06	IMR
2,4,5-Trichlorophenol	ND	0.41	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:06	IMR
2,4,6-Trichlorophenol	ND	0.41	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:06	IMR
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
2-Fluorophenol	83.3		30-130				3/15/19 19:06		
Phenol-d6	90.3		30-130				3/15/19 19:06		
Nitrobenzene-d5	93.1		30-130				3/15/19 19:06		
2-Fluorobiphenyl	77.4		30-130				3/15/19 19:06		
2,4,6-Tribromophenol	90.2		30-130				3/15/19 19:06		
p-Terphenyl-d14	94.0		30-130				3/15/19 19:06		

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19C0481

Date Received: 3/12/2019

Field Sample #: TP-V-103

Sampled: 3/12/2019 14:40

Sample ID: 19C0481-03

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.094	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 15:27	TG
Aroclor-1221 [1]	ND	0.094	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 15:27	TG
Aroclor-1232 [1]	ND	0.094	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 15:27	TG
Aroclor-1242 [1]	ND	0.094	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 15:27	TG
Aroclor-1248 [1]	ND	0.094	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 15:27	TG
Aroclor-1254 [1]	ND	0.094	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 15:27	TG
Aroclor-1260 [1]	ND	0.094	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 15:27	TG
Aroclor-1262 [1]	ND	0.094	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 15:27	TG
Aroclor-1268 [1]	ND	0.094	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 15:27	TG
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		87.1	30-150					3/18/19 15:27	
Decachlorobiphenyl [2]		79.9	30-150					3/18/19 15:27	
Tetrachloro-m-xylene [1]		98.9	30-150					3/18/19 15:27	
Tetrachloro-m-xylene [2]		98.6	30-150					3/18/19 15:27	

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19C0481

Date Received: 3/12/2019

Sampled: 3/12/2019 14:40

Field Sample #: TP-V-103

Sample ID: 19C0481-03

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	530	200	mg/Kg dry	20		SW-846 8100 Modified	3/14/19	3/16/19 1:36	KLB
<b>Surrogates</b>		<b>% Recovery</b>	<b>Recovery Limits</b>		<b>Flag/Qual</b>				
2-Fluorobiphenyl		*	40-140		S-01			3/16/19 1:36	

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19C0481

Date Received: 3/12/2019

Sampled: 3/12/2019 14:40

Field Sample #: TP-V-103

Sample ID: 19C0481-03

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	2.0	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 16:27	QNW
Arsenic	6.9	2.0	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 16:27	QNW
Barium	56	2.0	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 16:27	QNW
Beryllium	0.54	0.20	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 16:27	QNW
Cadmium	0.39	0.20	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 16:27	QNW
Chromium	25	0.40	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 16:27	QNW
Lead	20	0.59	mg/Kg dry	1	M-10	SW-846 6010D	3/13/19	3/14/19 16:27	QNW
Mercury	0.040	0.030	mg/Kg dry	1		SW-846 7471B	3/13/19	3/15/19 13:43	TBC
Nickel	18	0.40	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 16:27	QNW
Selenium	ND	4.0	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 16:27	QNW
Silver	ND	0.40	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 15:21	QNW
Thallium	ND	2.0	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 16:27	QNW
Vanadium	32	0.79	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 16:27	QNW
Zinc	48	0.79	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 16:27	QNW

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0481

Date Received: 3/12/2019

Field Sample #: TP-V-103

Sampled: 3/12/2019 14:40

Sample ID: 19C0481-03

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	82.4		% Wt	1		SM 2540G	3/13/19	3/14/19 6:41	VLH
Ignitability	Absent		present/absent	1		SW-846 1030	3/17/19	3/17/19 12:20	KMV
pH @20.7°C	7.8		pH Units	1		SW-846 9045C	3/12/19	3/12/19 20:38	AIA
Reactive Cyanide	ND	4.0	mg/Kg	1		SW-846 9014	3/14/19	3/15/19 11:07	KMV
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	3/14/19	3/15/19 10:28	KMV
Specific conductance	16	2.0	µmhos/cm	1		SM21-22 2510B Modified	3/16/19	3/16/19 13:31	EC



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0481

Date Received: 3/12/2019

Field Sample #: TP-V-104

Sampled: 3/12/2019 14:45

Sample ID: 19C0481-04

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.091	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:30	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00091	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:30	MFF
Benzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:30	MFF
Bromobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:30	MFF
Bromochloromethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:30	MFF
Bromodichloromethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:30	MFF
Bromoform	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:30	MFF
Bromomethane	ND	0.0091	mg/Kg dry	1	V-34	SW-846 8260C	3/14/19	3/15/19 0:30	MFF
2-Butanone (MEK)	ND	0.037	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:30	MFF
n-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:30	MFF
sec-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:30	MFF
tert-Butylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:30	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00091	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:30	MFF
Carbon Disulfide	ND	0.0055	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:30	MFF
Carbon Tetrachloride	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:30	MFF
Chlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:30	MFF
Chlorodibromomethane	ND	0.00091	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:30	MFF
Chloroethane	ND	0.0091	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:30	MFF
Chloroform	ND	0.0037	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:30	MFF
Chloromethane	ND	0.0091	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:30	MFF
2-Chlorotoluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:30	MFF
4-Chlorotoluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:30	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0037	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:30	MFF
1,2-Dibromoethane (EDB)	ND	0.00091	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:30	MFF
Dibromomethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:30	MFF
1,2-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:30	MFF
1,3-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:30	MFF
1,4-Dichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:30	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.0091	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:30	MFF
1,1-Dichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:30	MFF
1,2-Dichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:30	MFF
1,1-Dichloroethylene	ND	0.0037	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:30	MFF
cis-1,2-Dichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:30	MFF
trans-1,2-Dichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:30	MFF
1,2-Dichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:30	MFF
1,3-Dichloropropane	ND	0.00091	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:30	MFF
2,2-Dichloropropane	ND	0.0018	mg/Kg dry	1	V-05	SW-846 8260C	3/14/19	3/15/19 0:30	MFF
1,1-Dichloropropene	ND	0.0037	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:30	MFF
cis-1,3-Dichloropropene	ND	0.00091	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:30	MFF
trans-1,3-Dichloropropene	ND	0.00091	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:30	MFF
Diethyl Ether	ND	0.0091	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:30	MFF
Diisopropyl Ether (DIPE)	ND	0.00091	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:30	MFF
1,4-Dioxane	ND	0.18	mg/Kg dry	1	V-05, V-16	SW-846 8260C	3/14/19	3/15/19 0:30	MFF
Ethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:30	MFF

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0481

Date Received: 3/12/2019

Sampled: 3/12/2019 14:45

Field Sample #: TP-V-104

Sample ID: 19C0481-04

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:30	MFF
2-Hexanone (MBK)	ND	0.018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:30	MFF
Isopropylbenzene (Cumene)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:30	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:30	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0037	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:30	MFF
Methylene Chloride	ND	0.0091	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:30	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:30	MFF
Naphthalene	ND	0.0037	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:30	MFF
n-Propylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:30	MFF
Styrene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:30	MFF
1,1,1,2-Tetrachloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:30	MFF
1,1,1,2,2-Tetrachloroethane	ND	0.00091	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:30	MFF
Tetrachloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:30	MFF
Tetrahydrofuran	ND	0.0091	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:30	MFF
Toluene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:30	MFF
1,2,3-Trichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:30	MFF
1,2,4-Trichlorobenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:30	MFF
1,1,1-Trichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:30	MFF
1,1,2-Trichloroethane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:30	MFF
Trichloroethylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:30	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0091	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:30	MFF
1,2,3-Trichloropropane	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:30	MFF
1,2,4-Trimethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:30	MFF
1,3,5-Trimethylbenzene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:30	MFF
Vinyl Chloride	ND	0.0091	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:30	MFF
m+p Xylene	ND	0.0037	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:30	MFF
o-Xylene	ND	0.0018	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:30	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	92.5	70-130	
Toluene-d8	97.9	70-130	
4-Bromofluorobenzene	96.4	70-130	

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19C0481

Date Received: 3/12/2019

Field Sample #: TP-V-104

Sampled: 3/12/2019 14:45

Sample ID: 19C0481-04

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatle Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.38	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 19:31	IMR
Acenaphthylene	ND	0.38	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 19:31	IMR
Acetophenone	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 19:31	IMR
Aniline	ND	0.77	mg/Kg dry	2	V-34	SW-846 8270D	3/14/19	3/15/19 19:31	IMR
Anthracene	ND	0.38	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 19:31	IMR
Benzo(a)anthracene	ND	0.38	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 19:31	IMR
Benzo(a)pyrene	ND	0.38	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 19:31	IMR
Benzo(b)fluoranthene	0.42	0.38	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 19:31	IMR
Benzo(g,h,i)perylene	ND	0.38	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 19:31	IMR
Benzo(k)fluoranthene	ND	0.38	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 19:31	IMR
Bis(2-chloroethoxy)methane	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 19:31	IMR
Bis(2-chloroethyl)ether	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 19:31	IMR
Bis(2-chloroisopropyl)ether	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 19:31	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 19:31	IMR
4-Bromophenylphenylether	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 19:31	IMR
Butylbenzylphthalate	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 19:31	IMR
4-Chloroaniline	ND	1.5	mg/Kg dry	2	V-34	SW-846 8270D	3/14/19	3/15/19 19:31	IMR
2-Chloronaphthalene	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 19:31	IMR
2-Chlorophenol	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 19:31	IMR
Chrysene	ND	0.38	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 19:31	IMR
Dibenz(a,h)anthracene	ND	0.38	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 19:31	IMR
Dibenzofuran	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 19:31	IMR
Di-n-butylphthalate	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 19:31	IMR
1,2-Dichlorobenzene	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 19:31	IMR
1,3-Dichlorobenzene	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 19:31	IMR
1,4-Dichlorobenzene	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 19:31	IMR
3,3-Dichlorobenzidine	ND	0.38	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 19:31	IMR
2,4-Dichlorophenol	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 19:31	IMR
Diethylphthalate	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 19:31	IMR
2,4-Dimethylphenol	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 19:31	IMR
Dimethylphthalate	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 19:31	IMR
2,4-Dinitrophenol	ND	1.5	mg/Kg dry	2	V-05	SW-846 8270D	3/14/19	3/15/19 19:31	IMR
2,4-Dinitrotoluene	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 19:31	IMR
2,6-Dinitrotoluene	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 19:31	IMR
Di-n-octylphthalate	ND	0.77	mg/Kg dry	2	V-20	SW-846 8270D	3/14/19	3/15/19 19:31	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 19:31	IMR
Fluoranthene	ND	0.38	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 19:31	IMR
Fluorene	ND	0.38	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 19:31	IMR
Hexachlorobenzene	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 19:31	IMR
Hexachlorobutadiene	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 19:31	IMR
Hexachloroethane	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 19:31	IMR
Indeno(1,2,3-cd)pyrene	ND	0.38	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 19:31	IMR
Isophorone	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 19:31	IMR
2-Methylnaphthalene	ND	0.38	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 19:31	IMR

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0481

Date Received: 3/12/2019

Sampled: 3/12/2019 14:45

Field Sample #: TP-V-104

Sample ID: 19C0481-04

Sample Matrix: Soil

Sample Flags: RL-08

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 19:31	IMR
3/4-Methylphenol	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 19:31	IMR
Naphthalene	ND	0.38	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 19:31	IMR
Nitrobenzene	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 19:31	IMR
2-Nitrophenol	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 19:31	IMR
4-Nitrophenol	ND	1.5	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 19:31	IMR
Pentachlorophenol	ND	0.77	mg/Kg dry	2	V-05	SW-846 8270D	3/14/19	3/15/19 19:31	IMR
Phenanthrene	ND	0.38	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 19:31	IMR
Phenol	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 19:31	IMR
Pyrene	0.53	0.38	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 19:31	IMR
1,2,4-Trichlorobenzene	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 19:31	IMR
2,4,5-Trichlorophenol	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 19:31	IMR
2,4,6-Trichlorophenol	ND	0.77	mg/Kg dry	2		SW-846 8270D	3/14/19	3/15/19 19:31	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	71.3	30-130	
Phenol-d6	80.1	30-130	
Nitrobenzene-d5	75.9	30-130	
2-Fluorobiphenyl	59.8	30-130	
2,4,6-Tribromophenol	72.9	30-130	
p-Terphenyl-d14	70.0	30-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0481

Date Received: 3/12/2019

Field Sample #: TP-V-104

Sampled: 3/12/2019 14:45

Sample ID: 19C0481-04

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 15:44	TG
Aroclor-1221 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 15:44	TG
Aroclor-1232 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 15:44	TG
Aroclor-1242 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 15:44	TG
Aroclor-1248 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 15:44	TG
Aroclor-1254 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 15:44	TG
Aroclor-1260 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 15:44	TG
Aroclor-1262 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 15:44	TG
Aroclor-1268 [1]	ND	0.085	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 15:44	TG
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		89.9	30-150					3/18/19 15:44	
Decachlorobiphenyl [2]		84.9	30-150					3/18/19 15:44	
Tetrachloro-m-xylene [1]		104	30-150					3/18/19 15:44	
Tetrachloro-m-xylene [2]		102	30-150					3/18/19 15:44	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0481

Date Received: 3/12/2019

Sampled: 3/12/2019 14:45

Field Sample #: TP-V-104

Sample ID: 19C0481-04

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	960	470	mg/Kg dry	50		SW-846 8100 Modified	3/14/19	3/16/19 1:56	KLB
<b>Surrogates</b>		<b>% Recovery</b>	<b>Recovery Limits</b>		<b>Flag/Qual</b>				
2-Fluorobiphenyl		*	40-140		S-01			3/16/19 1:56	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0481

Date Received: 3/12/2019

Sampled: 3/12/2019 14:45

Field Sample #: TP-V-104

Sample ID: 19C0481-04

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 16:33	QNW
Arsenic	4.7	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 16:33	QNW
Barium	37	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 16:33	QNW
Beryllium	0.28	0.19	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 16:33	QNW
Cadmium	0.30	0.19	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 16:33	QNW
Chromium	16	0.38	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 16:33	QNW
Lead	24	0.56	mg/Kg dry	1	M-10	SW-846 6010D	3/13/19	3/14/19 16:33	QNW
Mercury	0.073	0.030	mg/Kg dry	1		SW-846 7471B	3/13/19	3/15/19 13:45	TBC
Nickel	11	0.38	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 16:33	QNW
Selenium	ND	3.8	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 16:33	QNW
Silver	ND	0.38	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 15:27	QNW
Thallium	ND	1.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 16:33	QNW
Vanadium	19	0.75	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 16:33	QNW
Zinc	48	0.75	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 16:33	QNW

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0481

Date Received: 3/12/2019

Sampled: 3/12/2019 14:45

Field Sample #: TP-V-104

Sample ID: 19C0481-04

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	88.1		% Wt	1		SM 2540G	3/13/19	3/14/19 6:41	VLH
Ignitability	Absent		present/absent	1		SW-846 1030	3/17/19	3/17/19 12:20	KMV
pH @19.7°C	7.3		pH Units	1		SW-846 9045C	3/12/19	3/12/19 21:49	AIA
Reactive Cyanide	ND	4.0	mg/Kg	1		SW-846 9014	3/14/19	3/15/19 11:07	KMV
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	3/14/19	3/15/19 10:28	KMV
Specific conductance	9.3	2.0	µmhos/cm	1		SM21-22 2510B Modified	3/16/19	3/16/19 13:31	EC



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0481

Date Received: 3/12/2019

Field Sample #: TP-V-105

Sampled: 3/12/2019 14:50

Sample ID: 19C0481-05

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.12	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:57	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:57	MFF
Benzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:57	MFF
Bromobenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:57	MFF
Bromochloromethane	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:57	MFF
Bromodichloromethane	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:57	MFF
Bromoform	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:57	MFF
Bromomethane	ND	0.012	mg/Kg dry	1	V-34	SW-846 8260C	3/14/19	3/15/19 0:57	MFF
2-Butanone (MEK)	ND	0.046	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:57	MFF
n-Butylbenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:57	MFF
sec-Butylbenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:57	MFF
tert-Butylbenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:57	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:57	MFF
Carbon Disulfide	ND	0.0069	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:57	MFF
Carbon Tetrachloride	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:57	MFF
Chlorobenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:57	MFF
Chlorodibromomethane	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:57	MFF
Chloroethane	ND	0.012	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:57	MFF
Chloroform	ND	0.0046	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:57	MFF
Chloromethane	ND	0.012	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:57	MFF
2-Chlorotoluene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:57	MFF
4-Chlorotoluene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:57	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0046	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:57	MFF
1,2-Dibromoethane (EDB)	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:57	MFF
Dibromomethane	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:57	MFF
1,2-Dichlorobenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:57	MFF
1,3-Dichlorobenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:57	MFF
1,4-Dichlorobenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:57	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.012	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:57	MFF
1,1-Dichloroethane	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:57	MFF
1,2-Dichloroethane	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:57	MFF
1,1-Dichloroethylene	ND	0.0046	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:57	MFF
cis-1,2-Dichloroethylene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:57	MFF
trans-1,2-Dichloroethylene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:57	MFF
1,2-Dichloropropane	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:57	MFF
1,3-Dichloropropane	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:57	MFF
2,2-Dichloropropane	ND	0.0023	mg/Kg dry	1	V-05	SW-846 8260C	3/14/19	3/15/19 0:57	MFF
1,1-Dichloropropene	ND	0.0046	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:57	MFF
cis-1,3-Dichloropropene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:57	MFF
trans-1,3-Dichloropropene	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:57	MFF
Diethyl Ether	ND	0.012	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:57	MFF
Diisopropyl Ether (DIPE)	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:57	MFF
1,4-Dioxane	ND	0.23	mg/Kg dry	1	V-05, V-16	SW-846 8260C	3/14/19	3/15/19 0:57	MFF
Ethylbenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:57	MFF

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0481

Date Received: 3/12/2019

Sampled: 3/12/2019 14:50

Field Sample #: TP-V-105

Sample ID: 19C0481-05

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:57	MFF
2-Hexanone (MBK)	ND	0.023	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:57	MFF
Isopropylbenzene (Cumene)	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:57	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:57	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0046	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:57	MFF
Methylene Chloride	ND	0.012	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:57	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.023	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:57	MFF
Naphthalene	ND	0.0046	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:57	MFF
n-Propylbenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:57	MFF
Styrene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:57	MFF
1,1,1,2-Tetrachloroethane	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:57	MFF
1,1,2,2-Tetrachloroethane	ND	0.0012	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:57	MFF
Tetrachloroethylene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:57	MFF
Tetrahydrofuran	ND	0.012	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:57	MFF
Toluene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:57	MFF
1,2,3-Trichlorobenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:57	MFF
1,2,4-Trichlorobenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:57	MFF
1,1,1-Trichloroethane	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:57	MFF
1,1,2-Trichloroethane	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:57	MFF
Trichloroethylene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:57	MFF
Trichlorofluoromethane (Freon 11)	ND	0.012	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:57	MFF
1,2,3-Trichloropropane	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:57	MFF
1,2,4-Trimethylbenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:57	MFF
1,3,5-Trimethylbenzene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:57	MFF
Vinyl Chloride	ND	0.012	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:57	MFF
m+p Xylene	ND	0.0046	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:57	MFF
o-Xylene	ND	0.0023	mg/Kg dry	1		SW-846 8260C	3/14/19	3/15/19 0:57	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	93.8	70-130	
Toluene-d8	97.6	70-130	
4-Bromofluorobenzene	96.4	70-130	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0481

Date Received: 3/12/2019

Field Sample #: TP-V-105

Sampled: 3/12/2019 14:50

Sample ID: 19C0481-05

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.20	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:57	IMR
Acenaphthylene	ND	0.20	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:57	IMR
Acetophenone	ND	0.41	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:57	IMR
Aniline	ND	0.41	mg/Kg dry	1	V-34	SW-846 8270D	3/14/19	3/15/19 19:57	IMR
Anthracene	ND	0.20	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:57	IMR
Benzo(a)anthracene	0.37	0.20	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:57	IMR
Benzo(a)pyrene	0.32	0.20	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:57	IMR
Benzo(b)fluoranthene	0.36	0.20	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:57	IMR
Benzo(g,h,i)perylene	ND	0.20	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:57	IMR
Benzo(k)fluoranthene	ND	0.20	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:57	IMR
Bis(2-chloroethoxy)methane	ND	0.41	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:57	IMR
Bis(2-chloroethyl)ether	ND	0.41	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:57	IMR
Bis(2-chloroisopropyl)ether	ND	0.41	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:57	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.41	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:57	IMR
4-Bromophenylphenylether	ND	0.41	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:57	IMR
Butylbenzylphthalate	ND	0.41	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:57	IMR
4-Chloroaniline	ND	0.79	mg/Kg dry	1	V-34	SW-846 8270D	3/14/19	3/15/19 19:57	IMR
2-Chloronaphthalene	ND	0.41	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:57	IMR
2-Chlorophenol	ND	0.41	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:57	IMR
Chrysene	0.33	0.20	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:57	IMR
Dibenz(a,h)anthracene	ND	0.20	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:57	IMR
Dibenzofuran	ND	0.41	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:57	IMR
Di-n-butylphthalate	ND	0.41	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:57	IMR
1,2-Dichlorobenzene	ND	0.41	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:57	IMR
1,3-Dichlorobenzene	ND	0.41	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:57	IMR
1,4-Dichlorobenzene	ND	0.41	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:57	IMR
3,3-Dichlorobenzidine	ND	0.20	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:57	IMR
2,4-Dichlorophenol	ND	0.41	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:57	IMR
Diethylphthalate	ND	0.41	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:57	IMR
2,4-Dimethylphenol	ND	0.41	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:57	IMR
Dimethylphthalate	ND	0.41	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:57	IMR
2,4-Dinitrophenol	ND	0.79	mg/Kg dry	1	V-05	SW-846 8270D	3/14/19	3/15/19 19:57	IMR
2,4-Dinitrotoluene	ND	0.41	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:57	IMR
2,6-Dinitrotoluene	ND	0.41	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:57	IMR
Di-n-octylphthalate	ND	0.41	mg/Kg dry	1	V-20	SW-846 8270D	3/14/19	3/15/19 19:57	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.41	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:57	IMR
Fluoranthene	0.77	0.20	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:57	IMR
Fluorene	ND	0.20	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:57	IMR
Hexachlorobenzene	ND	0.41	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:57	IMR
Hexachlorobutadiene	ND	0.41	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:57	IMR
Hexachloroethane	ND	0.41	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:57	IMR
Indeno(1,2,3-cd)pyrene	0.21	0.20	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:57	IMR
Isophorone	ND	0.41	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:57	IMR
2-Methylnaphthalene	ND	0.20	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:57	IMR

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19C0481

Date Received: 3/12/2019

Sampled: 3/12/2019 14:50

Field Sample #: TP-V-105

Sample ID: 19C0481-05

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	0.41	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:57	IMR
3/4-Methylphenol	ND	0.41	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:57	IMR
Naphthalene	ND	0.20	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:57	IMR
Nitrobenzene	ND	0.41	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:57	IMR
2-Nitrophenol	ND	0.41	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:57	IMR
4-Nitrophenol	ND	0.79	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:57	IMR
Pentachlorophenol	ND	0.41	mg/Kg dry	1	V-05	SW-846 8270D	3/14/19	3/15/19 19:57	IMR
Phenanthrene	0.76	0.20	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:57	IMR
Phenol	ND	0.41	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:57	IMR
Pyrene	0.87	0.20	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:57	IMR
1,2,4-Trichlorobenzene	ND	0.41	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:57	IMR
2,4,5-Trichlorophenol	ND	0.41	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:57	IMR
2,4,6-Trichlorophenol	ND	0.41	mg/Kg dry	1		SW-846 8270D	3/14/19	3/15/19 19:57	IMR
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
2-Fluorophenol	72.1		30-130				3/15/19 19:57		
Phenol-d6	78.2		30-130				3/15/19 19:57		
Nitrobenzene-d5	81.6		30-130				3/15/19 19:57		
2-Fluorobiphenyl	75.4		30-130				3/15/19 19:57		
2,4,6-Tribromophenol	80.7		30-130				3/15/19 19:57		
p-Terphenyl-d14	99.6		30-130				3/15/19 19:57		

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0481

Date Received: 3/12/2019

Field Sample #: TP-V-105

Sampled: 3/12/2019 14:50

Sample ID: 19C0481-05

Sample Matrix: Soil

Sample Flags: O-32

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.094	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 16:02	TG
Aroclor-1221 [1]	ND	0.094	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 16:02	TG
Aroclor-1232 [1]	ND	0.094	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 16:02	TG
Aroclor-1242 [1]	ND	0.094	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 16:02	TG
Aroclor-1248 [1]	ND	0.094	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 16:02	TG
Aroclor-1254 [1]	ND	0.094	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 16:02	TG
Aroclor-1260 [1]	ND	0.094	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 16:02	TG
Aroclor-1262 [1]	ND	0.094	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 16:02	TG
Aroclor-1268 [1]	ND	0.094	mg/Kg dry	4		SW-846 8082A	3/14/19	3/18/19 16:02	TG
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		98.1	30-150					3/18/19 16:02	
Decachlorobiphenyl [2]		93.2	30-150					3/18/19 16:02	
Tetrachloro-m-xylene [1]		109	30-150					3/18/19 16:02	
Tetrachloro-m-xylene [2]		107	30-150					3/18/19 16:02	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0481

Date Received: 3/12/2019

Sampled: 3/12/2019 14:50

Field Sample #: TP-V-105

Sample ID: 19C0481-05

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
TPH (C9-C36)	180	99	mg/Kg dry	10		SW-846 8100 Modified	3/14/19	3/15/19 23:15	RMW
<b>Surrogates</b>		<b>% Recovery</b>	<b>Recovery Limits</b>		<b>Flag/Qual</b>				
2-Fluorobiphenyl		79.2	40-140					3/15/19 23:15	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0481

Date Received: 3/12/2019

Field Sample #: TP-V-105

Sampled: 3/12/2019 14:50

Sample ID: 19C0481-05

Sample Matrix: Soil

**Metals Analyses (Total)**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	2.0	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 16:49	QNW
Arsenic	4.3	2.0	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 16:49	QNW
Barium	39	2.0	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 16:49	QNW
Beryllium	0.35	0.20	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 16:49	QNW
Cadmium	0.26	0.20	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 16:49	QNW
Chromium	18	0.39	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 16:49	QNW
Lead	15	0.59	mg/Kg dry	1	M-10	SW-846 6010D	3/13/19	3/14/19 16:49	QNW
Mercury	ND	0.031	mg/Kg dry	1		SW-846 7471B	3/13/19	3/15/19 13:46	TBC
Nickel	13	0.39	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 16:49	QNW
Selenium	ND	3.9	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 16:49	QNW
Silver	ND	0.39	mg/Kg dry	1		SW-846 6010D	3/13/19	3/15/19 15:32	QNW
Thallium	ND	2.0	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 16:49	QNW
Vanadium	23	0.78	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 16:49	QNW
Zinc	37	0.78	mg/Kg dry	1		SW-846 6010D	3/13/19	3/14/19 16:49	QNW

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C0481

Date Received: 3/12/2019

Field Sample #: TP-V-105

Sampled: 3/12/2019 14:50

Sample ID: 19C0481-05

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	82.2		% Wt	1		SM 2540G	3/13/19	3/14/19 6:41	VLH
Ignitability	Absent		present/absent	1		SW-846 1030	3/17/19	3/17/19 12:20	KMV
pH @19.1°C	7.7		pH Units	1		SW-846 9045C	3/12/19	3/12/19 21:49	AIA
Reactive Cyanide	ND	4.0	mg/Kg	1		SW-846 9014	3/14/19	3/15/19 11:07	KMV
Reactive Sulfide	ND	20	mg/Kg	1		SW-846 9030A	3/14/19	3/15/19 10:28	KMV
Specific conductance	17	2.0	µmhos/cm	1		SM21-22 2510B Modified	3/16/19	3/16/19 13:31	EC



**Sample Extraction Data**

**Prep Method: % Solids-SM 2540G**

Lab Number [Field ID]	Batch	Date
19C0481-01 [TP-V-101]	B225587	03/13/19
19C0481-02 [TP-V-102]	B225587	03/13/19
19C0481-03 [TP-V-103]	B225587	03/13/19
19C0481-04 [TP-V-104]	B225587	03/13/19
19C0481-05 [TP-V-105]	B225587	03/13/19

**SM21-22 2510B Modified**

Lab Number [Field ID]	Batch	Initial [g]	Date
19C0481-01 [TP-V-101]	B225914	1.00	03/16/19
19C0481-02 [TP-V-102]	B225914	1.00	03/16/19
19C0481-03 [TP-V-103]	B225914	1.00	03/16/19
19C0481-04 [TP-V-104]	B225914	1.00	03/16/19
19C0481-05 [TP-V-105]	B225914	1.00	03/16/19

**SW-846 1030**

Lab Number [Field ID]	Batch	Initial [g]	Date
19C0481-01 [TP-V-101]	B225932	50.0	03/17/19
19C0481-02 [TP-V-102]	B225932	50.0	03/17/19
19C0481-03 [TP-V-103]	B225932	50.0	03/17/19
19C0481-04 [TP-V-104]	B225932	50.0	03/17/19
19C0481-05 [TP-V-105]	B225932	50.0	03/17/19

**Prep Method: SW-846 3050B-SW-846 6010D**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C0481-01 [TP-V-101]	B225677	1.57	50.0	03/13/19
19C0481-02 [TP-V-102]	B225677	1.53	50.0	03/13/19
19C0481-03 [TP-V-103]	B225677	1.53	50.0	03/13/19
19C0481-04 [TP-V-104]	B225677	1.51	50.0	03/13/19
19C0481-05 [TP-V-105]	B225677	1.55	50.0	03/13/19

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C0481-01 [TP-V-101]	B225637	0.629	50.0	03/13/19
19C0481-02 [TP-V-102]	B225637	0.594	50.0	03/13/19
19C0481-03 [TP-V-103]	B225637	0.597	50.0	03/13/19
19C0481-04 [TP-V-104]	B225637	0.573	50.0	03/13/19
19C0481-05 [TP-V-105]	B225637	0.582	50.0	03/13/19

**Prep Method: SW-846 3540C-SW-846 8082A**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C0481-01 [TP-V-101]	B225713	10.8	10.0	03/14/19
19C0481-02 [TP-V-102]	B225713	10.2	10.0	03/14/19
19C0481-03 [TP-V-103]	B225713	10.3	10.0	03/14/19
19C0481-04 [TP-V-104]	B225713	10.7	10.0	03/14/19

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**Sample Extraction Data**

**Prep Method: SW-846 3540C-SW-846 8082A**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C0481-05 [TP-V-105]	B225713	10.4	10.0	03/14/19

**Prep Method: SW-846 3546-SW-846 8100 Modified**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C0481-01 [TP-V-101]	B225791	30.5	1.00	03/14/19
19C0481-02 [TP-V-102]	B225791	30.7	1.00	03/14/19
19C0481-03 [TP-V-103]	B225791	30.3	1.00	03/14/19
19C0481-04 [TP-V-104]	B225791	30.1	1.00	03/14/19
19C0481-05 [TP-V-105]	B225791	30.6	1.00	03/14/19

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C0481-01 [TP-V-101]	B225768	7.08	10.0	03/14/19
19C0481-02 [TP-V-102]	B225768	6.53	10.0	03/14/19
19C0481-03 [TP-V-103]	B225768	4.31	10.0	03/14/19
19C0481-04 [TP-V-104]	B225768	6.21	10.0	03/14/19
19C0481-05 [TP-V-105]	B225768	5.25	10.0	03/14/19

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

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C0481-01 [TP-V-101]	B225793	30.5	1.00	03/14/19
19C0481-02 [TP-V-102]	B225793	30.7	1.00	03/14/19
19C0481-03 [TP-V-103]	B225793	30.3	1.00	03/14/19
19C0481-04 [TP-V-104]	B225793	30.1	1.00	03/14/19
19C0481-05 [TP-V-105]	B225793	30.6	1.00	03/14/19

**SW-846 9014**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C0481-01 [TP-V-101]	B225772	25.2	250	03/14/19
19C0481-02 [TP-V-102]	B225772	25.8	250	03/14/19
19C0481-03 [TP-V-103]	B225772	25.3	250	03/14/19
19C0481-04 [TP-V-104]	B225772	25.1	250	03/14/19
19C0481-05 [TP-V-105]	B225772	25.2	250	03/14/19

**SW-846 9030A**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C0481-01 [TP-V-101]	B225773	25.2	250	03/14/19
19C0481-02 [TP-V-102]	B225773	25.8	250	03/14/19
19C0481-03 [TP-V-103]	B225773	25.3	250	03/14/19
19C0481-04 [TP-V-104]	B225773	25.1	250	03/14/19
19C0481-05 [TP-V-105]	B225773	25.2	250	03/14/19

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**Sample Extraction Data**

SW-846 9045C

Lab Number [Field ID]	Batch	Initial [g]	Date
19C0481-01 [TP-V-101]	B225573	20.0	03/12/19
19C0481-02 [TP-V-102]	B225573	20.0	03/12/19
19C0481-03 [TP-V-103]	B225573	20.0	03/12/19
19C0481-04 [TP-V-104]	B225573	20.0	03/12/19
19C0481-05 [TP-V-105]	B225573	20.0	03/12/19

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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 B225768 - SW-846 5035**

**Blank (B225768-BLK1)**

Prepared & Analyzed: 03/14/19

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							
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							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-05, 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 B225768 - SW-846 5035**

**Blank (B225768-BLK1)**

Prepared & Analyzed: 03/14/19

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	0.0452		mg/Kg wet	0.0500		90.4	70-130			
Surrogate: Toluene-d8	0.0479		mg/Kg wet	0.0500		95.7	70-130			
Surrogate: 4-Bromofluorobenzene	0.0482		mg/Kg wet	0.0500		96.4	70-130			

**LCS (B225768-BS1)**

Prepared & Analyzed: 03/14/19

Acetone	0.232	0.10	mg/Kg wet	0.200		116	40-160			†
tert-Amyl Methyl Ether (TAME)	0.0174	0.0010	mg/Kg wet	0.0200		87.2	70-130			
Benzene	0.0172	0.0020	mg/Kg wet	0.0200		86.0	70-130			
Bromobenzene	0.0192	0.0020	mg/Kg wet	0.0200		96.1	70-130			
Bromochloromethane	0.0174	0.0020	mg/Kg wet	0.0200		87.0	70-130			
Bromodichloromethane	0.0184	0.0020	mg/Kg wet	0.0200		92.0	70-130			
Bromoform	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130			
Bromomethane	0.0180	0.010	mg/Kg wet	0.0200		90.0	40-160	V-34		†
2-Butanone (MEK)	0.168	0.040	mg/Kg wet	0.200		83.9	40-160			†
n-Butylbenzene	0.0189	0.0020	mg/Kg wet	0.0200		94.3	70-130			
sec-Butylbenzene	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130			
tert-Butylbenzene	0.0197	0.0020	mg/Kg wet	0.0200		98.4	70-130			
tert-Butyl Ethyl Ether (TBEE)	0.0165	0.0010	mg/Kg wet	0.0200		82.5	70-130			
Carbon Disulfide	0.0244	0.0060	mg/Kg wet	0.0200		122	70-130			
Carbon Tetrachloride	0.0167	0.0020	mg/Kg wet	0.0200		83.5	70-130			
Chlorobenzene	0.0212	0.0020	mg/Kg wet	0.0200		106	70-130			
Chlorodibromomethane	0.0198	0.0010	mg/Kg wet	0.0200		99.2	70-130			
Chloroethane	0.0193	0.010	mg/Kg wet	0.0200		96.6	70-130			
Chloroform	0.0172	0.0040	mg/Kg wet	0.0200		86.1	70-130			
Chloromethane	0.0179	0.010	mg/Kg wet	0.0200		89.4	40-160			†
2-Chlorotoluene	0.0200	0.0020	mg/Kg wet	0.0200		100	70-130			
4-Chlorotoluene	0.0198	0.0020	mg/Kg wet	0.0200		99.2	70-130			
1,2-Dibromo-3-chloropropane (DBCP)	0.0161	0.0020	mg/Kg wet	0.0200		80.7	70-130			
1,2-Dibromoethane (EDB)	0.0190	0.0010	mg/Kg wet	0.0200		95.0	70-130			
Dibromomethane	0.0195	0.0020	mg/Kg wet	0.0200		97.3	70-130			
1,2-Dichlorobenzene	0.0222	0.0020	mg/Kg wet	0.0200		111	70-130			
1,3-Dichlorobenzene	0.0212	0.0020	mg/Kg wet	0.0200		106	70-130			
1,4-Dichlorobenzene	0.0203	0.0020	mg/Kg wet	0.0200		102	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
<b>Batch B225768 - SW-846 5035</b>										
<b>LCS (B225768-BS1)</b>										
Prepared & Analyzed: 03/14/19										
Dichlorodifluoromethane (Freon 12)	0.0141	0.010	mg/Kg wet	0.0200		70.4	40-160			†
1,1-Dichloroethane	0.0179	0.0020	mg/Kg wet	0.0200		89.4	70-130			
1,2-Dichloroethane	0.0189	0.0020	mg/Kg wet	0.0200		94.6	70-130			
1,1-Dichloroethylene	0.0215	0.0040	mg/Kg wet	0.0200		108	70-130			
cis-1,2-Dichloroethylene	0.0180	0.0020	mg/Kg wet	0.0200		90.0	70-130			
trans-1,2-Dichloroethylene	0.0185	0.0020	mg/Kg wet	0.0200		92.6	70-130			
1,2-Dichloropropane	0.0196	0.0020	mg/Kg wet	0.0200		98.0	70-130			
1,3-Dichloropropane	0.0181	0.0010	mg/Kg wet	0.0200		90.4	70-130			
2,2-Dichloropropane	0.0162	0.0020	mg/Kg wet	0.0200		81.1	70-130			V-05
1,1-Dichloropropene	0.0173	0.0020	mg/Kg wet	0.0200		86.5	70-130			
cis-1,3-Dichloropropene	0.0194	0.0010	mg/Kg wet	0.0200		97.0	70-130			
trans-1,3-Dichloropropene	0.0174	0.0010	mg/Kg wet	0.0200		87.0	70-130			
Diethyl Ether	0.0218	0.010	mg/Kg wet	0.0200		109	70-130			
Diisopropyl Ether (DIPE)	0.0176	0.0010	mg/Kg wet	0.0200		88.0	70-130			
1,4-Dioxane	0.156	0.10	mg/Kg wet	0.200		78.2	40-160			V-05, V-16 †
Ethylbenzene	0.0194	0.0020	mg/Kg wet	0.0200		96.9	70-130			
Hexachlorobutadiene	0.0207	0.0020	mg/Kg wet	0.0200		103	70-130			
2-Hexanone (MBK)	0.182	0.020	mg/Kg wet	0.200		91.0	40-160			†
Isopropylbenzene (Cumene)	0.0222	0.0020	mg/Kg wet	0.0200		111	70-130			
p-Isopropyltoluene (p-Cymene)	0.0199	0.0020	mg/Kg wet	0.0200		99.5	70-130			
Methyl tert-Butyl Ether (MTBE)	0.0171	0.0040	mg/Kg wet	0.0200		85.7	70-130			
Methylene Chloride	0.0175	0.010	mg/Kg wet	0.0200		87.5	70-130			
4-Methyl-2-pentanone (MIBK)	0.187	0.020	mg/Kg wet	0.200		93.3	40-160			†
Naphthalene	0.0186	0.0040	mg/Kg wet	0.0200		92.8	70-130			
n-Propylbenzene	0.0208	0.0020	mg/Kg wet	0.0200		104	70-130			
Styrene	0.0206	0.0020	mg/Kg wet	0.0200		103	70-130			
1,1,1,2-Tetrachloroethane	0.0214	0.0020	mg/Kg wet	0.0200		107	70-130			
1,1,2,2-Tetrachloroethane	0.0184	0.0010	mg/Kg wet	0.0200		91.9	70-130			
Tetrachloroethylene	0.0221	0.0020	mg/Kg wet	0.0200		111	70-130			
Tetrahydrofuran	0.0165	0.010	mg/Kg wet	0.0200		82.5	70-130			
Toluene	0.0196	0.0020	mg/Kg wet	0.0200		97.8	70-130			
1,2,3-Trichlorobenzene	0.0200	0.0020	mg/Kg wet	0.0200		100	70-130			
1,2,4-Trichlorobenzene	0.0201	0.0020	mg/Kg wet	0.0200		100	70-130			
1,1,1-Trichloroethane	0.0174	0.0020	mg/Kg wet	0.0200		86.8	70-130			
1,1,2-Trichloroethane	0.0171	0.0020	mg/Kg wet	0.0200		85.5	70-130			
Trichloroethylene	0.0190	0.0020	mg/Kg wet	0.0200		95.0	70-130			
Trichlorofluoromethane (Freon 11)	0.0198	0.010	mg/Kg wet	0.0200		98.8	70-130			
1,2,3-Trichloropropane	0.0172	0.0020	mg/Kg wet	0.0200		86.0	70-130			
1,2,4-Trimethylbenzene	0.0183	0.0020	mg/Kg wet	0.0200		91.4	70-130			
1,3,5-Trimethylbenzene	0.0192	0.0020	mg/Kg wet	0.0200		96.0	70-130			
Vinyl Chloride	0.0186	0.010	mg/Kg wet	0.0200		92.8	70-130			
m+p Xylene	0.0373	0.0040	mg/Kg wet	0.0400		93.3	70-130			
o-Xylene	0.0189	0.0020	mg/Kg wet	0.0200		94.5	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0438		mg/Kg wet	0.0500		87.5	70-130			
Surrogate: Toluene-d8	0.0495		mg/Kg wet	0.0500		98.9	70-130			
Surrogate: 4-Bromofluorobenzene	0.0493		mg/Kg wet	0.0500		98.5	70-130			

**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
<b>Batch B225768 - SW-846 5035</b>										
<b>LCS Dup (B225768-BSD1)</b>										
Prepared & Analyzed: 03/14/19										
Acetone	0.227	0.10	mg/Kg wet	0.200		113	40-160	2.42	20	†
tert-Amyl Methyl Ether (TAME)	0.0169	0.0010	mg/Kg wet	0.0200		84.7	70-130	2.91	20	
Benzene	0.0165	0.0020	mg/Kg wet	0.0200		82.6	70-130	4.03	20	
Bromobenzene	0.0186	0.0020	mg/Kg wet	0.0200		93.1	70-130	3.17	20	
Bromochloromethane	0.0179	0.0020	mg/Kg wet	0.0200		89.4	70-130	2.72	20	
Bromodichloromethane	0.0185	0.0020	mg/Kg wet	0.0200		92.7	70-130	0.758	20	
Bromoform	0.0199	0.0020	mg/Kg wet	0.0200		99.5	70-130	1.60	20	
Bromomethane	0.0173	0.010	mg/Kg wet	0.0200		86.6	40-160	3.85	20	V-34 †
2-Butanone (MEK)	0.170	0.040	mg/Kg wet	0.200		84.8	40-160	1.07	20	†
n-Butylbenzene	0.0189	0.0020	mg/Kg wet	0.0200		94.7	70-130	0.423	20	
sec-Butylbenzene	0.0204	0.0020	mg/Kg wet	0.0200		102	70-130	1.28	20	
tert-Butylbenzene	0.0195	0.0020	mg/Kg wet	0.0200		97.5	70-130	0.919	20	
tert-Butyl Ethyl Ether (TBEE)	0.0166	0.0010	mg/Kg wet	0.0200		83.2	70-130	0.845	20	
Carbon Disulfide	0.0240	0.0060	mg/Kg wet	0.0200		120	70-130	1.74	20	
Carbon Tetrachloride	0.0175	0.0020	mg/Kg wet	0.0200		87.4	70-130	4.56	20	
Chlorobenzene	0.0216	0.0020	mg/Kg wet	0.0200		108	70-130	1.87	20	
Chlorodibromomethane	0.0199	0.0010	mg/Kg wet	0.0200		99.4	70-130	0.201	20	
Chloroethane	0.0197	0.010	mg/Kg wet	0.0200		98.5	70-130	1.95	20	
Chloroform	0.0175	0.0040	mg/Kg wet	0.0200		87.4	70-130	1.50	20	
Chloromethane	0.0177	0.010	mg/Kg wet	0.0200		88.7	40-160	0.786	20	†
2-Chlorotoluene	0.0189	0.0020	mg/Kg wet	0.0200		94.3	70-130	5.97	20	
4-Chlorotoluene	0.0199	0.0020	mg/Kg wet	0.0200		99.7	70-130	0.503	20	
1,2-Dibromo-3-chloropropane (DBCP)	0.0169	0.0020	mg/Kg wet	0.0200		84.3	70-130	4.36	20	
1,2-Dibromoethane (EDB)	0.0186	0.0010	mg/Kg wet	0.0200		93.2	70-130	1.91	20	
Dibromomethane	0.0191	0.0020	mg/Kg wet	0.0200		95.6	70-130	1.76	20	
1,2-Dichlorobenzene	0.0207	0.0020	mg/Kg wet	0.0200		104	70-130	7.08	20	
1,3-Dichlorobenzene	0.0215	0.0020	mg/Kg wet	0.0200		107	70-130	1.22	20	
1,4-Dichlorobenzene	0.0201	0.0020	mg/Kg wet	0.0200		100	70-130	1.29	20	
Dichlorodifluoromethane (Freon 12)	0.0128	0.010	mg/Kg wet	0.0200		64.0	40-160	9.52	20	L-14 †
1,1-Dichloroethane	0.0176	0.0020	mg/Kg wet	0.0200		88.0	70-130	1.58	20	
1,2-Dichloroethane	0.0174	0.0020	mg/Kg wet	0.0200		86.9	70-130	8.48	20	
1,1-Dichloroethylene	0.0215	0.0040	mg/Kg wet	0.0200		108	70-130	0.00	20	
cis-1,2-Dichloroethylene	0.0181	0.0020	mg/Kg wet	0.0200		90.5	70-130	0.554	20	
trans-1,2-Dichloroethylene	0.0177	0.0020	mg/Kg wet	0.0200		88.3	70-130	4.75	20	
1,2-Dichloropropane	0.0189	0.0020	mg/Kg wet	0.0200		94.5	70-130	3.64	20	
1,3-Dichloropropane	0.0180	0.0010	mg/Kg wet	0.0200		90.1	70-130	0.332	20	
2,2-Dichloropropane	0.0151	0.0020	mg/Kg wet	0.0200		75.7	70-130	6.89	20	V-05
1,1-Dichloropropene	0.0149	0.0020	mg/Kg wet	0.0200		74.6	70-130	14.8	20	
cis-1,3-Dichloropropene	0.0187	0.0010	mg/Kg wet	0.0200		93.6	70-130	3.57	20	
trans-1,3-Dichloropropene	0.0170	0.0010	mg/Kg wet	0.0200		85.1	70-130	2.21	20	
Diethyl Ether	0.0216	0.010	mg/Kg wet	0.0200		108	70-130	0.921	20	
Diisopropyl Ether (DIPE)	0.0174	0.0010	mg/Kg wet	0.0200		86.9	70-130	1.26	20	
1,4-Dioxane	0.137	0.10	mg/Kg wet	0.200		68.4	40-160	13.4	20	L-14, V-05, V-16 †
Ethylbenzene	0.0186	0.0020	mg/Kg wet	0.0200		93.0	70-130	4.11	20	
Hexachlorobutadiene	0.0211	0.0020	mg/Kg wet	0.0200		105	70-130	1.82	20	
2-Hexanone (MBK)	0.180	0.020	mg/Kg wet	0.200		90.0	40-160	1.07	20	†
Isopropylbenzene (Cumene)	0.0207	0.0020	mg/Kg wet	0.0200		104	70-130	6.80	20	
p-Isopropyltoluene (p-Cymene)	0.0190	0.0020	mg/Kg wet	0.0200		95.2	70-130	4.42	20	
Methyl tert-Butyl Ether (MTBE)	0.0164	0.0040	mg/Kg wet	0.0200		82.1	70-130	4.29	20	
Methylene Chloride	0.0173	0.010	mg/Kg wet	0.0200		86.3	70-130	1.38	20	
4-Methyl-2-pentanone (MIBK)	0.185	0.020	mg/Kg wet	0.200		92.7	40-160	0.591	20	†
Naphthalene	0.0171	0.0040	mg/Kg wet	0.0200		85.5	70-130	8.19	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
<b>Batch B225768 - SW-846 5035</b>										
<b>LCS Dup (B225768-BSD1)</b>										
Prepared & Analyzed: 03/14/19										
n-Propylbenzene	0.0206	0.0020	mg/Kg wet	0.0200		103	70-130	1.26	20	
Styrene	0.0204	0.0020	mg/Kg wet	0.0200		102	70-130	0.585	20	
1,1,1,2-Tetrachloroethane	0.0204	0.0020	mg/Kg wet	0.0200		102	70-130	4.78	20	
1,1,2,2-Tetrachloroethane	0.0181	0.0010	mg/Kg wet	0.0200		90.7	70-130	1.31	20	
Tetrachloroethylene	0.0208	0.0020	mg/Kg wet	0.0200		104	70-130	6.25	20	
Tetrahydrofuran	0.0186	0.010	mg/Kg wet	0.0200		93.2	70-130	12.2	20	
Toluene	0.0189	0.0020	mg/Kg wet	0.0200		94.4	70-130	3.54	20	
1,2,3-Trichlorobenzene	0.0186	0.0020	mg/Kg wet	0.0200		93.2	70-130	7.14	20	
1,2,4-Trichlorobenzene	0.0189	0.0020	mg/Kg wet	0.0200		94.6	70-130	5.85	20	
1,1,1-Trichloroethane	0.0164	0.0020	mg/Kg wet	0.0200		81.8	70-130	5.93	20	
1,1,2-Trichloroethane	0.0173	0.0020	mg/Kg wet	0.0200		86.3	70-130	0.931	20	
Trichloroethylene	0.0187	0.0020	mg/Kg wet	0.0200		93.3	70-130	1.81	20	
Trichlorofluoromethane (Freon 11)	0.0199	0.010	mg/Kg wet	0.0200		99.3	70-130	0.505	20	
1,2,3-Trichloropropane	0.0176	0.0020	mg/Kg wet	0.0200		88.2	70-130	2.53	20	
1,2,4-Trimethylbenzene	0.0186	0.0020	mg/Kg wet	0.0200		92.8	70-130	1.52	20	
1,3,5-Trimethylbenzene	0.0190	0.0020	mg/Kg wet	0.0200		95.2	70-130	0.837	20	
Vinyl Chloride	0.0174	0.010	mg/Kg wet	0.0200		87.2	70-130	6.22	20	
m+p Xylene	0.0377	0.0040	mg/Kg wet	0.0400		94.4	70-130	1.17	20	
o-Xylene	0.0200	0.0020	mg/Kg wet	0.0200		99.8	70-130	5.46	20	
Surrogate: 1,2-Dichloroethane-d4	0.0442		mg/Kg wet	0.0500		88.5	70-130			
Surrogate: Toluene-d8	0.0499		mg/Kg wet	0.0500		99.8	70-130			
Surrogate: 4-Bromofluorobenzene	0.0486		mg/Kg wet	0.0500		97.2	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
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**Batch B225793 - SW-846 3546**

**Blank (B225793-BLK1)**

Prepared: 03/14/19 Analyzed: 03/15/19

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							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							
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							
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							
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							
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							
2,4-Dinitrophenol	ND	0.66	mg/Kg wet							
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							
1,2-Diphenylhydrazine/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
<b>Batch B225793 - SW-846 3546</b>										
<b>Blank (B225793-BLK1)</b>										
Prepared: 03/14/19 Analyzed: 03/15/19										
Phenol	ND	0.34	mg/Kg wet							
Pyrene	ND	0.17	mg/Kg wet							
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	5.27		mg/Kg wet	6.67		79.0	30-130			
Surrogate: Phenol-d6	5.27		mg/Kg wet	6.67		79.1	30-130			
Surrogate: Nitrobenzene-d5	2.61		mg/Kg wet	3.33		78.3	30-130			
Surrogate: 2-Fluorobiphenyl	2.94		mg/Kg wet	3.33		88.2	30-130			
Surrogate: 2,4,6-Tribromophenol	6.74		mg/Kg wet	6.67		101	30-130			
Surrogate: p-Terphenyl-d14	3.11		mg/Kg wet	3.33		93.2	30-130			
<b>LCS (B225793-BS1)</b>										
Prepared: 03/14/19 Analyzed: 03/15/19										
Acenaphthene	1.34	0.17	mg/Kg wet	1.67		80.2	40-140			
Acenaphthylene	1.40	0.17	mg/Kg wet	1.67		83.7	40-140			
Acetophenone	1.26	0.34	mg/Kg wet	1.67		75.7	40-140			
Aniline	1.02	0.34	mg/Kg wet	1.67		61.3	40-140			V-34
Anthracene	1.48	0.17	mg/Kg wet	1.67		88.7	40-140			
Benzo(a)anthracene	1.39	0.17	mg/Kg wet	1.67		83.3	40-140			
Benzo(a)pyrene	1.52	0.17	mg/Kg wet	1.67		91.3	40-140			
Benzo(b)fluoranthene	1.42	0.17	mg/Kg wet	1.67		85.0	40-140			
Benzo(g,h,i)perylene	1.62	0.17	mg/Kg wet	1.67		97.5	40-140			
Benzo(k)fluoranthene	1.41	0.17	mg/Kg wet	1.67		84.5	40-140			
Bis(2-chloroethoxy)methane	1.56	0.34	mg/Kg wet	1.67		93.6	40-140			
Bis(2-chloroethyl)ether	1.36	0.34	mg/Kg wet	1.67		81.4	40-140			
Bis(2-chloroisopropyl)ether	1.48	0.34	mg/Kg wet	1.67		88.7	40-140			
Bis(2-Ethylhexyl)phthalate	1.44	0.34	mg/Kg wet	1.67		86.4	40-140			
4-Bromophenylphenylether	1.50	0.34	mg/Kg wet	1.67		89.8	40-140			
Butylbenzylphthalate	1.42	0.34	mg/Kg wet	1.67		85.3	40-140			
4-Chloroaniline	1.04	0.66	mg/Kg wet	1.67		62.2	15-140			V-34 †
2-Chloronaphthalene	1.26	0.34	mg/Kg wet	1.67		75.4	40-140			
2-Chlorophenol	1.37	0.34	mg/Kg wet	1.67		82.2	30-130			
Chrysene	1.43	0.17	mg/Kg wet	1.67		85.9	40-140			
Dibenz(a,h)anthracene	1.62	0.17	mg/Kg wet	1.67		97.0	40-140			
Dibenzofuran	1.42	0.34	mg/Kg wet	1.67		85.3	40-140			
Di-n-butylphthalate	1.44	0.34	mg/Kg wet	1.67		86.6	40-140			
1,2-Dichlorobenzene	1.21	0.34	mg/Kg wet	1.67		72.8	40-140			
1,3-Dichlorobenzene	1.20	0.34	mg/Kg wet	1.67		71.7	40-140			
1,4-Dichlorobenzene	1.19	0.34	mg/Kg wet	1.67		71.6	40-140			
3,3-Dichlorobenzidine	1.42	0.17	mg/Kg wet	1.67		85.4	40-140			
2,4-Dichlorophenol	1.46	0.34	mg/Kg wet	1.67		87.5	30-130			
Diethylphthalate	1.42	0.34	mg/Kg wet	1.67		84.9	40-140			
2,4-Dimethylphenol	1.46	0.34	mg/Kg wet	1.67		87.5	30-130			
Dimethylphthalate	1.44	0.34	mg/Kg wet	1.67		86.2	40-140			
2,4-Dinitrophenol	1.54	0.66	mg/Kg wet	1.67		92.6	15-140			†
2,4-Dinitrotoluene	1.41	0.34	mg/Kg wet	1.67		84.4	40-140			
2,6-Dinitrotoluene	1.43	0.34	mg/Kg wet	1.67		85.5	40-140			
Di-n-octylphthalate	1.38	0.34	mg/Kg wet	1.67		82.8	40-140			
1,2-Diphenylhydrazine/Azobenzene	1.36	0.34	mg/Kg wet	1.67		81.7	40-140			
Fluoranthene	1.49	0.17	mg/Kg wet	1.67		89.2	40-140			
Fluorene	1.43	0.17	mg/Kg wet	1.67		85.8	40-140			
Hexachlorobenzene	1.48	0.34	mg/Kg wet	1.67		88.5	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
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**Batch B225793 - SW-846 3546**

**LCS (B225793-BS1)**

Prepared: 03/14/19 Analyzed: 03/15/19

Hexachlorobutadiene	1.27	0.34	mg/Kg wet	1.67		76.5	40-140			
Hexachloroethane	1.18	0.34	mg/Kg wet	1.67		70.5	40-140			
Indeno(1,2,3-cd)pyrene	1.51	0.17	mg/Kg wet	1.67		90.5	40-140			
Isophorone	1.38	0.34	mg/Kg wet	1.67		82.9	40-140			
2-Methylnaphthalene	1.41	0.17	mg/Kg wet	1.67		84.6	40-140			
2-Methylphenol	1.36	0.34	mg/Kg wet	1.67		81.9	30-130			
3/4-Methylphenol	1.28	0.34	mg/Kg wet	1.67		76.8	30-130			
Naphthalene	1.35	0.17	mg/Kg wet	1.67		80.8	40-140			
Nitrobenzene	1.26	0.34	mg/Kg wet	1.67		75.6	40-140			
2-Nitrophenol	1.42	0.34	mg/Kg wet	1.67		85.4	30-130			
4-Nitrophenol	1.45	0.66	mg/Kg wet	1.67		86.7	15-140			†
Pentachlorophenol	1.62	0.34	mg/Kg wet	1.67		97.2	30-130			
Phenanthrene	1.45	0.17	mg/Kg wet	1.67		87.3	40-140			
Phenol	1.40	0.34	mg/Kg wet	1.67		84.3	15-140			†
Pyrene	1.41	0.17	mg/Kg wet	1.67		84.7	40-140			
1,2,4-Trichlorobenzene	1.33	0.34	mg/Kg wet	1.67		79.6	40-140			
2,4,5-Trichlorophenol	1.42	0.34	mg/Kg wet	1.67		85.4	30-130			
2,4,6-Trichlorophenol	1.46	0.34	mg/Kg wet	1.67		87.5	30-130			
Surrogate: 2-Fluorophenol	5.47		mg/Kg wet	6.67		82.0	30-130			
Surrogate: Phenol-d6	5.63		mg/Kg wet	6.67		84.4	30-130			
Surrogate: Nitrobenzene-d5	2.68		mg/Kg wet	3.33		80.5	30-130			
Surrogate: 2-Fluorobiphenyl	3.00		mg/Kg wet	3.33		89.9	30-130			
Surrogate: 2,4,6-Tribromophenol	6.86		mg/Kg wet	6.67		103	30-130			
Surrogate: p-Terphenyl-d14	3.12		mg/Kg wet	3.33		93.5	30-130			

**LCS Dup (B225793-BS1)**

Prepared: 03/14/19 Analyzed: 03/15/19

Acenaphthene	1.41	0.17	mg/Kg wet	1.67		84.5	40-140	5.15	30	
Acenaphthylene	1.45	0.17	mg/Kg wet	1.67		86.9	40-140	3.73	30	
Acetophenone	1.28	0.34	mg/Kg wet	1.67		77.0	40-140	1.62	30	
Aniline	0.936	0.34	mg/Kg wet	1.67		56.1	40-140	8.82	30	V-34
Anthracene	1.58	0.17	mg/Kg wet	1.67		94.7	40-140	6.50	30	
Benzo(a)anthracene	1.50	0.17	mg/Kg wet	1.67		89.8	40-140	7.48	30	
Benzo(a)pyrene	1.63	0.17	mg/Kg wet	1.67		97.5	40-140	6.65	30	
Benzo(b)fluoranthene	1.51	0.17	mg/Kg wet	1.67		90.9	40-140	6.64	30	
Benzo(g,h,i)perylene	1.73	0.17	mg/Kg wet	1.67		104	40-140	6.18	30	
Benzo(k)fluoranthene	1.56	0.17	mg/Kg wet	1.67		93.8	40-140	10.4	30	
Bis(2-chloroethoxy)methane	1.59	0.34	mg/Kg wet	1.67		95.3	40-140	1.84	30	
Bis(2-chloroethyl)ether	1.39	0.34	mg/Kg wet	1.67		83.6	40-140	2.62	30	
Bis(2-chloroisopropyl)ether	1.48	0.34	mg/Kg wet	1.67		89.1	40-140	0.360	30	
Bis(2-Ethylhexyl)phthalate	1.56	0.34	mg/Kg wet	1.67		93.8	40-140	8.24	30	
4-Bromophenylphenylether	1.58	0.34	mg/Kg wet	1.67		94.8	40-140	5.42	30	
Butylbenzylphthalate	1.56	0.34	mg/Kg wet	1.67		93.6	40-140	9.24	30	
4-Chloroaniline	0.939	0.66	mg/Kg wet	1.67		56.3	15-140	9.92	30	V-34 †
2-Chloronaphthalene	1.29	0.34	mg/Kg wet	1.67		77.5	40-140	2.72	30	
2-Chlorophenol	1.39	0.34	mg/Kg wet	1.67		83.5	30-130	1.59	30	
Chrysene	1.55	0.17	mg/Kg wet	1.67		93.1	40-140	8.04	30	
Dibenz(a,h)anthracene	1.54	0.17	mg/Kg wet	1.67		92.5	40-140	4.79	30	
Dibenzofuran	1.50	0.34	mg/Kg wet	1.67		90.2	40-140	5.58	30	
Di-n-butylphthalate	1.54	0.34	mg/Kg wet	1.67		92.5	40-140	6.61	30	
1,2-Dichlorobenzene	1.26	0.34	mg/Kg wet	1.67		75.4	40-140	3.43	30	
1,3-Dichlorobenzene	1.22	0.34	mg/Kg wet	1.67		73.4	40-140	2.40	30	
1,4-Dichlorobenzene	1.22	0.34	mg/Kg wet	1.67		73.2	40-140	2.24	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
<b>Batch B225793 - SW-846 3546</b>										
<b>LCS Dup (B225793-BSD1)</b>										
					Prepared: 03/14/19 Analyzed: 03/15/19					
3,3-Dichlorobenzidine	1.39	0.17	mg/Kg wet	1.67		83.2	40-140	2.61	30	
2,4-Dichlorophenol	1.52	0.34	mg/Kg wet	1.67		91.5	30-130	4.45	30	
Diethylphthalate	1.52	0.34	mg/Kg wet	1.67		91.4	40-140	7.28	30	
2,4-Dimethylphenol	1.51	0.34	mg/Kg wet	1.67		90.9	30-130	3.72	30	
Dimethylphthalate	1.55	0.34	mg/Kg wet	1.67		93.1	40-140	7.72	30	
2,4-Dinitrophenol	1.63	0.66	mg/Kg wet	1.67		97.9	15-140	5.54	30	†
2,4-Dinitrotoluene	1.53	0.34	mg/Kg wet	1.67		91.6	40-140	8.13	30	
2,6-Dinitrotoluene	1.57	0.34	mg/Kg wet	1.67		94.5	40-140	9.93	30	
Di-n-octylphthalate	1.48	0.34	mg/Kg wet	1.67		88.6	40-140	6.82	30	
1,2-Diphenylhydrazine/Azobenzene	1.44	0.34	mg/Kg wet	1.67		86.4	40-140	5.59	30	
Fluoranthene	1.62	0.17	mg/Kg wet	1.67		97.2	40-140	8.54	30	
Fluorene	1.51	0.17	mg/Kg wet	1.67		90.6	40-140	5.35	30	
Hexachlorobenzene	1.54	0.34	mg/Kg wet	1.67		92.4	40-140	4.31	30	
Hexachlorobutadiene	1.27	0.34	mg/Kg wet	1.67		76.0	40-140	0.577	30	
Hexachloroethane	1.20	0.34	mg/Kg wet	1.67		72.0	40-140	2.13	30	
Indeno(1,2,3-cd)pyrene	1.64	0.17	mg/Kg wet	1.67		98.4	40-140	8.41	30	
Isophorone	1.41	0.34	mg/Kg wet	1.67		84.5	40-140	1.89	30	
2-Methylnaphthalene	1.44	0.17	mg/Kg wet	1.67		86.3	40-140	2.08	30	
2-Methylphenol	1.40	0.34	mg/Kg wet	1.67		83.7	30-130	2.25	30	
3/4-Methylphenol	1.34	0.34	mg/Kg wet	1.67		80.4	30-130	4.66	30	
Naphthalene	1.36	0.17	mg/Kg wet	1.67		81.8	40-140	1.25	30	
Nitrobenzene	1.29	0.34	mg/Kg wet	1.67		77.4	40-140	2.27	30	
2-Nitrophenol	1.42	0.34	mg/Kg wet	1.67		85.5	30-130	0.140	30	
4-Nitrophenol	1.50	0.66	mg/Kg wet	1.67		90.0	15-140	3.71	30	†
Pentachlorophenol	1.70	0.34	mg/Kg wet	1.67		102	30-130	5.02	30	
Phenanthrene	1.57	0.17	mg/Kg wet	1.67		94.3	40-140	7.69	30	
Phenol	1.42	0.34	mg/Kg wet	1.67		85.1	15-140	1.02	30	†
Pyrene	1.52	0.17	mg/Kg wet	1.67		91.2	40-140	7.41	30	
1,2,4-Trichlorobenzene	1.31	0.34	mg/Kg wet	1.67		78.4	40-140	1.49	30	
2,4,5-Trichlorophenol	1.53	0.34	mg/Kg wet	1.67		91.6	30-130	7.00	30	
2,4,6-Trichlorophenol	1.55	0.34	mg/Kg wet	1.67		92.9	30-130	6.05	30	
Surrogate: 2-Fluorophenol	5.52		mg/Kg wet	6.67		82.8	30-130			
Surrogate: Phenol-d6	5.66		mg/Kg wet	6.67		84.9	30-130			
Surrogate: Nitrobenzene-d5	2.67		mg/Kg wet	3.33		80.2	30-130			
Surrogate: 2-Fluorobiphenyl	3.04		mg/Kg wet	3.33		91.1	30-130			
Surrogate: 2,4,6-Tribromophenol	7.24		mg/Kg wet	6.67		109	30-130			
Surrogate: p-Terphenyl-d14	3.30		mg/Kg wet	3.33		98.9	30-130			

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**QUALITY CONTROL**

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B225713 - SW-846 3540C**

**Blank (B225713-BLK1)**

Prepared: 03/14/19 Analyzed: 03/18/19

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	0.213		mg/Kg wet	0.200		106	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.239		mg/Kg wet	0.200		120	30-150			
Surrogate: Tetrachloro-m-xylene	0.192		mg/Kg wet	0.200		95.9	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.194		mg/Kg wet	0.200		97.2	30-150			

**LCS (B225713-BS1)**

Prepared: 03/14/19 Analyzed: 03/18/19

Aroclor-1016	0.19	0.020	mg/Kg wet	0.200		94.7	40-140			
Aroclor-1016 [2C]	0.18	0.020	mg/Kg wet	0.200		91.3	40-140			
Aroclor-1260	0.19	0.020	mg/Kg wet	0.200		93.9	40-140			
Aroclor-1260 [2C]	0.18	0.020	mg/Kg wet	0.200		91.3	40-140			
Surrogate: Decachlorobiphenyl	0.225		mg/Kg wet	0.200		112	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.248		mg/Kg wet	0.200		124	30-150			
Surrogate: Tetrachloro-m-xylene	0.207		mg/Kg wet	0.200		104	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.209		mg/Kg wet	0.200		104	30-150			

**LCS Dup (B225713-BSD1)**

Prepared: 03/14/19 Analyzed: 03/18/19

Aroclor-1016	0.18	0.020	mg/Kg wet	0.200		89.5	40-140	5.58	30	
Aroclor-1016 [2C]	0.17	0.020	mg/Kg wet	0.200		86.1	40-140	5.90	30	
Aroclor-1260	0.18	0.020	mg/Kg wet	0.200		87.6	40-140	6.88	30	
Aroclor-1260 [2C]	0.17	0.020	mg/Kg wet	0.200		84.7	40-140	7.50	30	
Surrogate: Decachlorobiphenyl	0.205		mg/Kg wet	0.200		102	30-150			
Surrogate: Decachlorobiphenyl [2C]	0.225		mg/Kg wet	0.200		112	30-150			
Surrogate: Tetrachloro-m-xylene	0.192		mg/Kg wet	0.200		95.9	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	0.193		mg/Kg wet	0.200		96.3	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
<b>Batch B225791 - SW-846 3546</b>										
<b>Blank (B225791-BLK1)</b>					Prepared: 03/14/19 Analyzed: 03/15/19					
TPH (C9-C36)	ND	8.3	mg/Kg wet							
Surrogate: 2-Fluorobiphenyl	2.44		mg/Kg wet	3.33		73.2	40-140			
<b>LCS (B225791-BS1)</b>					Prepared: 03/14/19 Analyzed: 03/15/19					
TPH (C9-C36)	27.2	8.3	mg/Kg wet	33.3		81.5	40-140			
Surrogate: 2-Fluorobiphenyl	2.56		mg/Kg wet	3.33		76.9	40-140			
<b>LCS Dup (B225791-BSD1)</b>					Prepared: 03/14/19 Analyzed: 03/15/19					
TPH (C9-C36)	26.5	8.3	mg/Kg wet	33.3		79.4	40-140	2.67	30	
Surrogate: 2-Fluorobiphenyl	2.47		mg/Kg wet	3.33		74.0	40-140			
<b>Matrix Spike (B225791-MS1)</b>					Source: 19C0481-01 Prepared: 03/14/19 Analyzed: 03/15/19					
TPH (C9-C36)	455	190	mg/Kg dry	37.4	495	-107 *	40-140			MS-19
Surrogate: 2-Fluorobiphenyl	0.00		mg/Kg dry	3.74		*	40-140			S-01
<b>Matrix Spike Dup (B225791-MSD1)</b>					Source: 19C0481-01 Prepared: 03/14/19 Analyzed: 03/16/19					
TPH (C9-C36)	592	190	mg/Kg dry	37.3	495	258 *	40-140	26.0	30	MS-19
Surrogate: 2-Fluorobiphenyl	0.00		mg/Kg dry	3.73		*	40-140			S-01

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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
<b>Batch B225637 - SW-846 7471</b>										
<b>Blank (B225637-BLK1)</b> Prepared: 03/13/19 Analyzed: 03/15/19										
Mercury	ND	0.025	mg/Kg wet							
<b>LCS (B225637-BS1)</b> Prepared: 03/13/19 Analyzed: 03/15/19										
Mercury	3.20	0.37	mg/Kg wet	3.71		86.3	65-135			
<b>LCS Dup (B225637-BSD1)</b> Prepared: 03/13/19 Analyzed: 03/15/19										
Mercury	3.37	0.38	mg/Kg wet	3.71		90.7	65-135	4.99	30	
<b>Batch B225677 - SW-846 3050B</b>										
<b>Blank (B225677-BLK1)</b> Prepared: 03/13/19 Analyzed: 03/14/19										
Antimony	ND	1.7	mg/Kg wet							
Arsenic	ND	1.7	mg/Kg wet							
Barium	ND	1.7	mg/Kg wet							
Beryllium	ND	0.17	mg/Kg wet							
Cadmium	ND	0.17	mg/Kg wet							
Chromium	ND	0.33	mg/Kg wet							
Lead	ND	0.50	mg/Kg wet							
Nickel	ND	0.33	mg/Kg wet							
Selenium	ND	3.3	mg/Kg wet							
Silver	ND	0.33	mg/Kg wet							
Thallium	ND	1.7	mg/Kg wet							
Vanadium	ND	0.67	mg/Kg wet							
Zinc	ND	0.67	mg/Kg wet							
<b>LCS (B225677-BS1)</b> Prepared: 03/13/19 Analyzed: 03/14/19										
Antimony	81.3	4.7	mg/Kg wet	89.6		90.7	3.3-196.4			
Arsenic	198	4.7	mg/Kg wet	202		98.1	82.7-117.3			
Barium	283	4.7	mg/Kg wet	270		105	82.6-117.8			
Beryllium	99.2	0.47	mg/Kg wet	96.8		103	83.4-116.7			
Cadmium	141	0.47	mg/Kg wet	141		100	83-117			
Chromium	168	0.93	mg/Kg wet	167		101	81.4-118			
Lead	73.0	1.4	mg/Kg wet	73.8		98.9	82.9-117.1			
Nickel	93.5	0.93	mg/Kg wet	89.4		105	82.9-117.5			
Selenium	43.6	9.3	mg/Kg wet	49.9		87.4	79.2-120.6			
Silver	73.8	0.93	mg/Kg wet	71.1		104	79.7-120.1			
Thallium	65.5	4.7	mg/Kg wet	58.5		112	80.7-119.5			
Vanadium	55.0	1.9	mg/Kg wet	58.2		94.5	79-121			
Zinc	263	1.9	mg/Kg wet	264		99.5	80.7-119.3			
<b>LCS Dup (B225677-BSD1)</b> Prepared: 03/13/19 Analyzed: 03/14/19										
Antimony	74.5	4.8	mg/Kg wet	89.6		83.1	3.3-196.4	8.72	30	
Arsenic	183	4.8	mg/Kg wet	202		90.8	82.7-117.3	7.74	30	
Barium	267	4.8	mg/Kg wet	270		98.9	82.6-117.8	5.72	30	
Beryllium	90.5	0.48	mg/Kg wet	96.8		93.5	83.4-116.7	9.15	30	
Cadmium	133	0.48	mg/Kg wet	141		94.4	83-117	5.98	30	
Chromium	156	0.96	mg/Kg wet	167		93.4	81.4-118	7.50	30	
Lead	68.4	1.4	mg/Kg wet	73.8		92.7	82.9-117.1	6.53	30	
Nickel	87.5	0.96	mg/Kg wet	89.4		97.8	82.9-117.5	6.65	30	
Selenium	41.1	9.6	mg/Kg wet	49.9		82.3	79.2-120.6	6.01	30	
Silver	68.0	0.96	mg/Kg wet	71.1		95.6	79.7-120.1	8.28	30	
Thallium	61.8	4.8	mg/Kg wet	58.5		106	80.7-119.5	5.85	30	
Vanadium	52.3	1.9	mg/Kg wet	58.2		89.9	79-121	4.96	30	
Zinc	250	1.9	mg/Kg wet	264		94.6	80.7-119.3	5.12	30	

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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
<b>Batch B225677 - SW-846 3050B</b>										
<b>MRL Check (B225677-MRL1)</b>					Prepared: 03/13/19 Analyzed: 03/14/19					
Lead	0.645	0.49	mg/Kg wet	0.491		131 *	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
<b>Batch B225573 - SW-846 9045C</b>										
<b>LCS (B225573-BS1)</b>				Prepared & Analyzed: 03/12/19						
pH	6.01		pH Units	6.00		100	90-110			
<b>LCS (B225573-BS2)</b>				Prepared & Analyzed: 03/12/19						
pH	5.99		pH Units	6.00		99.9	90-110			
<b>Duplicate (B225573-DUP1)</b>				<b>Source: 19C0481-03</b>		Prepared & Analyzed: 03/12/19				
pH	7.9		pH Units		7.8			0.560	5	
<b>Duplicate (B225573-DUP2)</b>				<b>Source: 19C0481-05</b>		Prepared & Analyzed: 03/12/19				
pH	7.7		pH Units		7.7			0.701	5	
<b>Batch B225587 - % Solids</b>										
<b>Duplicate (B225587-DUP5)</b>				<b>Source: 19C0481-04</b>		Prepared: 03/13/19 Analyzed: 03/14/19				
% Solids	81.5		% Wt		88.1			7.70	20	
<b>Batch B225772 - SW-846 9014</b>										
<b>Blank (B225772-BLK1)</b>				Prepared: 03/14/19 Analyzed: 03/15/19						
Reactive Cyanide	ND	0.40	mg/Kg							
<b>LCS (B225772-BS1)</b>				Prepared: 03/14/19 Analyzed: 03/15/19						
Reactive Cyanide	9.5	0.40	mg/Kg	10.0		95.4	83.6-111			
<b>Batch B225773 - SW-846 9030A</b>										
<b>Blank (B225773-BLK1)</b>				Prepared: 03/14/19 Analyzed: 03/15/19						
Reactive Sulfide	ND	2.0	mg/Kg							
<b>LCS (B225773-BS1)</b>				Prepared: 03/14/19 Analyzed: 03/15/19						
Reactive Sulfide	12	2.0	mg/Kg	14.8		81.1	54.9-121			
<b>Batch B225914 - SM21-22 2510B Modified</b>										
<b>Blank (B225914-BLK1)</b>				Prepared & Analyzed: 03/16/19						
Specific conductance	ND	2.0	µmhos/cm							
<b>LCS (B225914-BS1)</b>				Prepared & Analyzed: 03/16/19						
Specific conductance	190		µmhos/cm	192		100	90-110			

**IDENTIFICATION SUMMARY  
FOR SINGLE COMPONENT ANALYTES**

LCS

*SW-846 8082A*

Lab Sample ID:           B225713-BS1                                Date(s) Analyzed:           03/18/2019                     03/18/2019          

Instrument ID (1):           ECD5                                                Instrument ID (2):           ECD5          

GC Column (1):                                      ID:                                      (mm)                      GC Column (2):                                      ID:                                      (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.19	
	2	0.000	-0.030	0.030	0.18	5.4
Aroclor-1260	1	0.000	-0.030	0.030	0.19	
	2	0.000	-0.030	0.030	0.18	5.4

**IDENTIFICATION SUMMARY  
FOR SINGLE COMPONENT ANALYTES**

LCS Dup

*SW-846 8082A*

Lab Sample ID:                   B225713-BSD1                                        Date(s) Analyzed:           03/18/2019                     03/18/2019          

Instrument ID (1):                   ECD5                                        Instrument ID (2):                   ECD5                  

GC Column (1):                      ID:                      (mm)                      GC Column (2):                      ID:                      (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.18	
	2	0.000	-0.030	0.030	0.17	5.7
Aroclor-1260	1	0.000	-0.030	0.030	0.18	
	2	0.000	-0.030	0.030	0.17	5.7

**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.
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-19	Sample to spike ratio is greater than or equal to 4:1. Spiked amount is not representative of the native amount in the sample. Appropriate or meaningful recoveries cannot be calculated.
O-32	A dilution was performed as part of the standard analytical procedure.
RL-08	Elevated reporting limit due to sample matrix interference. MA CAM reporting limit not met.
S-01	The surrogate recovery for this sample is not available due to sample dilution below the surrogate reporting limit required from high analyte concentration and/or matrix interferences.
V-05	Continuing calibration verification (CCV) did not meet method specifications and was biased on the low side for this compound.
V-06	Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side for this compound.
V-16	Response factor is less than method specified minimum acceptable value. Reduced precision and accuracy may be associated with reported result.
V-20	Continuing calibration verification (CCV) 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.

**CERTIFICATIONS**

**Certified Analyses included in this Report**

Analyte	Certifications
<b>SW-846 1030 in Soil</b>	
Ignitability	NY,NH,CT,NC,ME,VA
<b>SW-846 6010D in Soil</b>	
Antimony	CT,NH,NY,ME,VA,NC
Arsenic	CT,NH,NY,ME,VA,NC
Barium	CT,NH,NY,ME,VA,NC
Beryllium	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
Nickel	CT,NH,NY,ME,VA,NC
Selenium	CT,NH,NY,ME,VA,NC
Silver	CT,NH,NY,ME,VA,NC
Thallium	CT,NH,NY,ME,VA,NC
Vanadium	CT,NH,NY,ME,VA,NC
Zinc	CT,NH,NY,ME,VA,NC
<b>SW-846 7471B in Soil</b>	
Mercury	CT,NH,NY,NC,ME,VA
<b>SW-846 8082A in Soil</b>	
Aroclor-1016	CT,NH,NY,ME,NC,VA
Aroclor-1016 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1221	CT,NH,NY,ME,NC,VA
Aroclor-1221 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1232	CT,NH,NY,ME,NC,VA
Aroclor-1232 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1242	CT,NH,NY,ME,NC,VA
Aroclor-1242 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1248	CT,NH,NY,ME,NC,VA
Aroclor-1248 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1254	CT,NH,NY,ME,NC,VA
Aroclor-1254 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1260	CT,NH,NY,ME,NC,VA
Aroclor-1260 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1262	NY,NC,VA
Aroclor-1262 [2C]	NY,NC,VA
Aroclor-1268	NY,NC,VA
Aroclor-1268 [2C]	NY,NC,VA
<b>SW-846 8260C in Soil</b>	
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

## CERTIFICATIONS

## Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8260C in Soil</i>	
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
1,2-Dibromo-3-chloropropane (DBCP)	NY
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
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

**CERTIFICATIONS**

**Certified Analyses included in this Report**

Analyte	Certifications
<b>SW-846 8260C in Soil</b>	
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
<b>SW-846 8270D in Soil</b>	
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
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

**CERTIFICATIONS**

**Certified Analyses included in this Report**

Analyte	Certifications
<b><i>SW-846 8270D in Soil</i></b>	
1,2-Diphenylhydrazine/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
2,4,5-Trichlorophenol	CT,NY,NH
2,4,6-Trichlorophenol	CT,NY,NH
<b><i>SW-846 8270D in Water</i></b>	
Acenaphthene	CT,NY,NH
Acenaphthylene	CT,NY,NH
Acetophenone	NY
Aniline	CT,NY
Anthracene	CT,NY,NH
Benzo(a)anthracene	CT,NY,NH
Benzo(a)pyrene	CT,NY,NH
Benzo(b)fluoranthene	CT,NY,NH
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



**CERTIFICATIONS**

**Certified Analyses included in this Report**

Analyte	Certifications
<i>SW-846 8270D in Water</i>	
1,2-Dichlorobenzene	CT,NY,NH
1,3-Dichlorobenzene	CT,NY,NH
1,4-Dichlorobenzene	CT,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/Azobenzene	NY
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
2,4,5-Trichlorophenol	CT,NY,NH
2,4,6-Trichlorophenol	CT,NY,NH

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

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2005	100033	03/1/2020
MA	Massachusetts DEP	M-MA100	06/30/2019
CT	Connecticut Department of Public Health	PH-0567	09/30/2019
NY	New York State Department of Health	10899 NELAP	04/1/2019
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2020
RI	Rhode Island Department of Health	LAO00112	12/30/2019
NC	North Carolina Div. of Water Quality	652	12/31/2019
NJ	New Jersey DEP	MA007 NELAP	06/30/2019
FL	Florida Department of Health	E871027 NELAP	06/30/2019
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2019
ME	State of Maine	2011028	06/9/2019
VA	Commonwealth of Virginia	460217	12/14/2019
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2019
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2019
NC-DW	North Carolina Department of Health	25703	07/31/2019

JLH  
Vortex  
100 N Washington St, 302, Boston, MA  
617-275-1507  
400 FT RIVERS EDGE

Project Location: MA  
Project Number: 410047  
Project Manager: K. Searson  
Con-Test Quote Name/Number:  
Invoice Recipient: K. Searson  
Sampled By: K. Searson

7-Day  10-Day   
Due Date: 5-DAY  
1-Day  3-Day   
2-Day  4-Day   
Format: PDF  EXCEL   
Other: EDP  
CLP Like Data Pkg Required:   
Email To: K.Searson@riveredge.com  
Fax To #:

Con-Test Work Order #	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	Composite	Grab	Matrix Code	Cont. Code
1	TR-V-101	3/12/19	1430	F		S	
2	TR-V-102		1435				
3	TR-V-103		1440				
4	TR-V-104		1445				
5	TR-V-105		1450				

ANALYSIS REQUESTED  
VOC 8270  
MCP 14 Metals  
PCBS 8025 Metals  
TTH 8100

MA MCP Required  
CT RCP Required  
MA State DW Required

Comments:  
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) Date/Time: 3/12/19 1525	MA MCP Required <input checked="" type="checkbox"/>
Received by: (signature) Date/Time: 3/12/19 1525	MCP Certification Form Required <input type="checkbox"/>
Relinquished by: (signature) Date/Time: 3/12/19 1815	RCP Certification Form Required <input type="checkbox"/>
Received by: (signature) Date/Time: 3/12/19 1815	MA State DW Required <input type="checkbox"/>
Relinquished by: (signature)	PWSID #
Received by: (signature)	MA MCP Required <input type="checkbox"/>
Relinquished by: (signature)	MCP Certification Form Required <input type="checkbox"/>
Relinquished by: (signature)	RCP Certification Form Required <input type="checkbox"/>
Relinquished by: (signature)	MA State DW Required <input type="checkbox"/>
Relinquished by: (signature)	PWSID #



NEIAC and AHA-LAP, LLC Accredited  
www.contestlabs.com

Project Entity  
 Government  
 Federal  
 City  
 Municipality  
 21 J  
 Brownfield  
 MWRA  
 School  
 MBTA  
 WRTA  
 Chromatogram  
 AHA-LAP, LLC  
 Other

PCB ONLY  
 Soxhlet  
 Non Soxhlet

I Have Not Confirmed Sample Container Numbers With Lab Staff Before Relinquishing Over Samples \_\_\_\_\_



**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 Vertex

Received By MF Date 3/12/19 Time 18:15

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 # 5 Actual Temp - 2.3  
 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 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

Are there Rushes? F

Are there Short Holds? T

Is there enough Volume? T

Is there Headspace where applicable? N/A

Proper Media/Containers Used? T

Were trip blanks received? N, T

Do all samples have the proper pH? N/A

Who was notified? \_\_\_\_\_

Who was notified? \_\_\_\_\_

Who was notified? Miranda

MS/MSD? F

Is splitting samples required? F

On COC? F

Acid \_\_\_\_\_ Base \_\_\_\_\_

Vials	#	Containers	#	#	#
Unp-		1 Liter Amb.		1 Liter Plastic	16 oz Amb.
HCL-		500 mL Amb.		500 mL Plastic	8oz Amb/Clear
Meoh-	5	250 mL Amb.		250 mL Plastic	4oz Amb/Clear
Bisulfate-	10	Flashpoint		Col./Bacteria	2oz Amb/Clear
DI-		Other Glass		Other Plastic	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-	5	250 mL Amb.		250 mL Plastic	4oz Amb/Clear
Bisulfate-	10	Col./Bacteria		Flashpoint	2oz Amb/Clear
DI-		Other Plastic		Other Glass	Encore
Thiosulfate-		SOC Kit		Plastic Bag	Frozen:
Sulfuric-		Perchlorate		Ziplock	

**Comments:**

Trip blanks received not on COC

## MADEP MCP Analytical Method Report Certification Form

Laboratory Name: Con-Test Analytical Laboratory	Project #: 19C0481
Project Location: Wayland, MA	RTN:

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]  
19C0481-01 thru 19C0481-06

Matrices: Soil Water

**CAM Protocol (check all that below)**

8260 VOC CAM II A (X)	7470/7471 Hg CAM III B (X)	MassDEP VPH CAM IV A ( )	8082 PCB CAM V A (X)	9014 Total Cyanide/PAC CAM VI A ( )	6860 Perchlorate CAM VIII B ( )
8270 SVOC CAM II B (X)	7010 Metals CAM III C ( )	MassDEP VPH CAM IV C ( )	8081 Pesticides CAM V B ( )	7196 Hex Cr CAM VI B ( )	MassDEP APH CAM IX A ( )
6010 Metals CAM III A (X)	6020 Metals CAM III D ( )	MassDEP EPH CAM IV B ( )	8151 Herbicides CAM V C ( )	8330 Explosives CAM VIII A ( )	TO-15 VOC CAM IX B ( )

**Affirmative response to Questions A through F is required for "Presumptive Certainty" status**

<b>A</b>	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?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>B</b>	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>C</b>	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>D</b>	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?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>E a</b>	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).	<input type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>E b</b>	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	<input type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>
<b>F</b>	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)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>

**A response to questions G, H and I below is required for "Presumptive Certainty" status**

<b>G</b>	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <sup>1</sup>
----------	---	--

**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.**

<b>H</b>	Were all QC performance standards specified in the CAM protocol(s) achieved?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <sup>1</sup>
<b>I</b>	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>1</sup>

<sup>1</sup>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: Lisa Worthington Position: Project Manager  
Printed Name: Lisa A. Worthington Date: 03/19/19

March 29, 2019

Kristen Sarson  
Vertex Engineering - Boston  
100 North Washington St. Suite 302  
Boston, MA 02114

Project Location: Wayland, MA  
Client Job Number:  
Project Number: 46047  
Laboratory Work Order Number: 19C1132

Enclosed are results of analyses for samples received by the laboratory on March 22, 2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, reading "Jessica Hoffman", is displayed on a light blue rectangular background.

Jessica L. Hoffman  
Project Manager

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Vertex Engineering - Boston  
 100 North Washington St. Suite 302  
 Boston, MA 02114  
 ATTN: Kristen Sarson

REPORT DATE: 3/29/2019

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 46047

**ANALYTICAL SUMMARY**

WORK ORDER NUMBER: 19C1132

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

PROJECT LOCATION: Wayland, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
TP-C3 (0-5)	19C1132-01	Soil		MADEP-EPH-04-1.1 SM 2540G	
TP-C3 (5-10)	19C1132-02	Soil		MADEP-EPH-04-1.1 SM 2540G	
TP-D3 (5-10)	19C1132-03	Soil		MADEP-EPH-04-1.1 SM 2540G	
TP-D3 (10-15)	19C1132-04	Soil		MADEP-EPH-04-1.1 SM 2540G	
TP-E3 (5-10)	19C1132-05	Soil		MADEP-EPH-04-1.1 SM 2540G	
TP-F3 (0-5)	19C1132-06	Soil		MADEP-EPH-04-1.1 SM 2540G	
TP-E2 (0-5)	19C1132-07	Soil		MADEP-EPH-04-1.1 SM 2540G	
TP-C2 (0-5)	19C1132-08	Soil		MADEP-EPH-04-1.1 SM 2540G	
TP-D1 (0-5)	19C1132-09	Soil		MADEP-EPH-04-1.1 SM 2540G	
TP-C1 (5-10)	19C1132-10	Soil		MADEP-EPH-04-1.1 SM 2540G	



**CASE NARRATIVE SUMMARY**

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

For method MA EPH, only hydrocarbon ranges were requested and reported.

**MADEP-EPH-04-1.1****Qualifications:****MS-07A**

Matrix spike and spike duplicate recovery is outside of control limits. Analysis is in control based on laboratory fortified blank recovery.

Possibility of matrix effects that lead to low bias or non-homogeneous sample aliquot cannot be eliminated.

**Analyte & Samples(s) Qualified:****C19-C36 Aliphatics**

19C1132-01[TP-C3 (0-5)], B226520-MS1, B226520-MSD1

**Unadjusted C11-C22 Aromatics**

19C1132-01[TP-C3 (0-5)], B226520-MS1, B226520-MSD1

**RL-08**

Elevated reporting limit due to sample matrix interference. MA CAM reporting limit not met.

**Analyte & Samples(s) Qualified:****C9-C18 Aliphatics**

19C1132-01[TP-C3 (0-5)], 19C1132-02[TP-C3 (5-10)], 19C1132-03[TP-D3 (5-10)], 19C1132-04[TP-D3 (10-15)], 19C1132-05[TP-E3 (5-10)], 19C1132-06[TP-F3 (0-5)],

19C1132-07[TP-E2 (0-5)], 19C1132-08[TP-C2 (0-5)], 19C1132-09[TP-D1 (0-5)], 19C1132-10[TP-C1 (5-10)]

**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 C 11-C22 aromatic range fraction in all samples in the batch. No significant modifications were made to the method.

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: Wayland, MA

Sample Description:

Work Order: 19C1132

Date Received: 3/22/2019

Field Sample #: TP-C3 (0-5)

Sampled: 3/12/2019 07:40

Sample ID: 19C1132-01

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses - EPH**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	53	mg/Kg dry	5	RL-08	MADEP-EPH-04-1.1	3/25/19	3/29/19 10:18	KLB
C19-C36 Aliphatics	210	53	mg/Kg dry	5	MS-07A	MADEP-EPH-04-1.1	3/25/19	3/29/19 10:18	KLB
Unadjusted C11-C22 Aromatics	260	53	mg/Kg dry	5	MS-07A	MADEP-EPH-04-1.1	3/25/19	3/29/19 10:18	KLB
C11-C22 Aromatics	250	53	mg/Kg dry	5		MADEP-EPH-04-1.1	3/25/19	3/29/19 10:18	KLB

Surrogates	% Recovery	Recovery Limits	Flag/Qual
Chlorooctadecane (COD)	72.4	40-140	
o-Terphenyl (OTP)	79.8	40-140	
2-Bromonaphthalene	108	40-140	
2-Fluorobiphenyl	96.8	40-140	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1132

Date Received: 3/22/2019

Sampled: 3/12/2019 07:40

Field Sample #: TP-C3 (0-5)

Sample ID: 19C1132-01

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	90.9		% Wt	1		SM 2540G	3/27/19	3/27/19 17:05	KG

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1132

Date Received: 3/22/2019

Field Sample #: TP-C3 (5-10)

Sampled: 3/12/2019 07:45

Sample ID: 19C1132-02

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses - EPH**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	55	mg/Kg dry	5	RL-08	MADEP-EPH-04-1.1	3/25/19	3/29/19 11:13	KLB
C19-C36 Aliphatics	310	55	mg/Kg dry	5		MADEP-EPH-04-1.1	3/25/19	3/29/19 11:13	KLB
Unadjusted C11-C22 Aromatics	470	55	mg/Kg dry	5		MADEP-EPH-04-1.1	3/25/19	3/29/19 11:13	KLB
C11-C22 Aromatics	430	55	mg/Kg dry	5		MADEP-EPH-04-1.1	3/25/19	3/29/19 11:13	KLB
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
Chlorooctadecane (COD)	81.3		40-140					3/29/19 11:13	
o-Terphenyl (OTP)	92.2		40-140					3/29/19 11:13	
2-Bromonaphthalene	100		40-140					3/29/19 11:13	
2-Fluorobiphenyl	94.6		40-140					3/29/19 11:13	

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1132

Date Received: 3/22/2019

Sampled: 3/12/2019 07:45

Field Sample #: TP-C3 (5-10)

Sample ID: 19C1132-02

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	90.2		% Wt	1		SM 2540G	3/27/19	3/27/19 17:05	KG

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1132

Date Received: 3/22/2019

Field Sample #: TP-D3 (5-10)

Sampled: 3/12/2019 08:15

Sample ID: 19C1132-03

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses - EPH**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	23	mg/Kg dry	2	RL-08	MADEP-EPH-04-1.1	3/25/19	3/29/19 11:32	KLB
C19-C36 Aliphatics	180	23	mg/Kg dry	2		MADEP-EPH-04-1.1	3/25/19	3/29/19 11:32	KLB
Unadjusted C11-C22 Aromatics	180	23	mg/Kg dry	2		MADEP-EPH-04-1.1	3/25/19	3/29/19 11:32	KLB
C11-C22 Aromatics	170	23	mg/Kg dry	2		MADEP-EPH-04-1.1	3/25/19	3/29/19 11:32	KLB
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
Chlorooctadecane (COD)	74.1		40-140				3/29/19 11:32		
o-Terphenyl (OTP)	84.5		40-140				3/29/19 11:32		
2-Bromonaphthalene	130		40-140				3/29/19 11:32		
2-Fluorobiphenyl	118		40-140				3/29/19 11:32		

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1132

Date Received: 3/22/2019

Sampled: 3/12/2019 08:15

Field Sample #: TP-D3 (5-10)

Sample ID: 19C1132-03

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	85.8		% Wt	1		SM 2540G	3/27/19	3/27/19 17:05	KG

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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1132

Date Received: 3/22/2019

Field Sample #: TP-D3 (10-15)

Sampled: 3/12/2019 08:30

Sample ID: 19C1132-04

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses - EPH**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	53	mg/Kg dry	5	RL-08	MADEP-EPH-04-1.1	3/25/19	3/29/19 11:50	KLB
C19-C36 Aliphatics	240	53	mg/Kg dry	5		MADEP-EPH-04-1.1	3/25/19	3/29/19 11:50	KLB
Unadjusted C11-C22 Aromatics	400	53	mg/Kg dry	5		MADEP-EPH-04-1.1	3/25/19	3/29/19 11:50	KLB
C11-C22 Aromatics	360	53	mg/Kg dry	5		MADEP-EPH-04-1.1	3/25/19	3/29/19 11:50	KLB
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
Chlorooctadecane (COD)	76.3		40-140				3/29/19 11:50		
o-Terphenyl (OTP)	88.6		40-140				3/29/19 11:50		
2-Bromonaphthalene	112		40-140				3/29/19 11:50		
2-Fluorobiphenyl	106		40-140				3/29/19 11:50		



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Project Location: Wayland, MA

Sample Description:

Work Order: 19C1132

Date Received: 3/22/2019

Field Sample #: TP-D3 (10-15)

Sampled: 3/12/2019 08:30

Sample ID: 19C1132-04

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	90.7		% Wt	1		SM 2540G	3/27/19	3/27/19 17:05	KG

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19C1132

Date Received: 3/22/2019

Field Sample #: TP-E3 (5-10)

Sampled: 3/12/2019 09:05

Sample ID: 19C1132-05

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses - EPH**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	24	mg/Kg dry	2	RL-08	MADEP-EPH-04-1.1	3/25/19	3/29/19 12:09	KLB
C19-C36 Aliphatics	130	24	mg/Kg dry	2		MADEP-EPH-04-1.1	3/25/19	3/29/19 12:09	KLB
Unadjusted C11-C22 Aromatics	190	24	mg/Kg dry	2		MADEP-EPH-04-1.1	3/25/19	3/29/19 12:09	KLB
C11-C22 Aromatics	170	24	mg/Kg dry	2		MADEP-EPH-04-1.1	3/25/19	3/29/19 12:09	KLB
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
Chlorooctadecane (COD)	74.4		40-140				3/29/19 12:09		
o-Terphenyl (OTP)	80.6		40-140				3/29/19 12:09		
2-Bromonaphthalene	111		40-140				3/29/19 12:09		
2-Fluorobiphenyl	104		40-140				3/29/19 12:09		

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19C1132

Date Received: 3/22/2019

Sampled: 3/12/2019 09:05

Field Sample #: TP-E3 (5-10)

Sample ID: 19C1132-05

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	83.4		% Wt	1		SM 2540G	3/27/19	3/27/19 17:05	KG

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19C1132

Date Received: 3/22/2019

Field Sample #: TP-F3 (0-5)

Sampled: 3/12/2019 09:20

Sample ID: 19C1132-06

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses - EPH**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	55	mg/Kg dry	5	RL-08	MADEP-EPH-04-1.1	3/25/19	3/29/19 12:27	KLB
C19-C36 Aliphatics	220	55	mg/Kg dry	5		MADEP-EPH-04-1.1	3/25/19	3/29/19 12:27	KLB
Unadjusted C11-C22 Aromatics	290	55	mg/Kg dry	5		MADEP-EPH-04-1.1	3/25/19	3/29/19 12:27	KLB
C11-C22 Aromatics	280	55	mg/Kg dry	5		MADEP-EPH-04-1.1	3/25/19	3/29/19 12:27	KLB
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
Chlorooctadecane (COD)	70.6		40-140					3/29/19 12:27	
o-Terphenyl (OTP)	76.7		40-140					3/29/19 12:27	
2-Bromonaphthalene	104		40-140					3/29/19 12:27	
2-Fluorobiphenyl	94.6		40-140					3/29/19 12:27	

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19C1132

Date Received: 3/22/2019

Sampled: 3/12/2019 09:20

Field Sample #: TP-F3 (0-5)

Sample ID: 19C1132-06

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	88.8		% Wt	1		SM 2540G	3/27/19	3/27/19 17:05	KG

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19C1132

Date Received: 3/22/2019

Field Sample #: TP-E2 (0-5)

Sampled: 3/12/2019 10:00

Sample ID: 19C1132-07

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses - EPH**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	55	mg/Kg dry	5	RL-08	MADEP-EPH-04-1.1	3/25/19	3/29/19 12:45	KLB
C19-C36 Aliphatics	150	55	mg/Kg dry	5		MADEP-EPH-04-1.1	3/25/19	3/29/19 12:45	KLB
Unadjusted C11-C22 Aromatics	220	55	mg/Kg dry	5		MADEP-EPH-04-1.1	3/25/19	3/29/19 12:45	KLB
C11-C22 Aromatics	210	55	mg/Kg dry	5		MADEP-EPH-04-1.1	3/25/19	3/29/19 12:45	KLB

Surrogates	% Recovery	Recovery Limits	Flag/Qual
Chlorooctadecane (COD)	73.9	40-140	
o-Terphenyl (OTP)	79.6	40-140	
2-Bromonaphthalene	105	40-140	
2-Fluorobiphenyl	94.9	40-140	

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19C1132

Date Received: 3/22/2019

Sampled: 3/12/2019 10:00

Field Sample #: TP-E2 (0-5)

Sample ID: 19C1132-07

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	90.3		% Wt	1		SM 2540G	3/27/19	3/27/19 17:05	KG

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19C1132

Date Received: 3/22/2019

Field Sample #: TP-C2 (0-5)

Sampled: 3/12/2019 10:50

Sample ID: 19C1132-08

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses - EPH**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	21	mg/Kg dry	2	RL-08	MADEP-EPH-04-1.1	3/25/19	3/29/19 13:04	KLB
C19-C36 Aliphatics	100	21	mg/Kg dry	2		MADEP-EPH-04-1.1	3/25/19	3/29/19 13:04	KLB
Unadjusted C11-C22 Aromatics	150	21	mg/Kg dry	2		MADEP-EPH-04-1.1	3/25/19	3/29/19 13:04	KLB
C11-C22 Aromatics	140	21	mg/Kg dry	2		MADEP-EPH-04-1.1	3/25/19	3/29/19 13:04	KLB
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
Chlorooctadecane (COD)	72.7		40-140				3/29/19 13:04		
o-Terphenyl (OTP)	79.3		40-140				3/29/19 13:04		
2-Bromonaphthalene	109		40-140				3/29/19 13:04		
2-Fluorobiphenyl	101		40-140				3/29/19 13:04		



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

Project Location: Wayland, MA

Sample Description:

Work Order: 19C1132

Date Received: 3/22/2019

Field Sample #: TP-C2 (0-5)

Sampled: 3/12/2019 10:50

Sample ID: 19C1132-08

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	89.7		% Wt	1		SM 2540G	3/27/19	3/27/19 17:05	KG

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19C1132

Date Received: 3/22/2019

Field Sample #: TP-D1 (0-5)

Sampled: 3/12/2019 11:45

Sample ID: 19C1132-09

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses - EPH**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	59	mg/Kg dry	5	RL-08	MADEP-EPH-04-1.1	3/25/19	3/29/19 13:22	KLB
C19-C36 Aliphatics	190	59	mg/Kg dry	5		MADEP-EPH-04-1.1	3/25/19	3/29/19 13:22	KLB
Unadjusted C11-C22 Aromatics	260	59	mg/Kg dry	5		MADEP-EPH-04-1.1	3/25/19	3/29/19 13:22	KLB
C11-C22 Aromatics	250	59	mg/Kg dry	5		MADEP-EPH-04-1.1	3/25/19	3/29/19 13:22	KLB

Surrogates	% Recovery	Recovery Limits	Flag/Qual
Chlorooctadecane (COD)	74.4	40-140	
o-Terphenyl (OTP)	82.6	40-140	
2-Bromonaphthalene	98.4	40-140	
2-Fluorobiphenyl	90.1	40-140	

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19C1132

Date Received: 3/22/2019

Sampled: 3/12/2019 11:45

Field Sample #: TP-D1 (0-5)

Sample ID: 19C1132-09

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	81.8		% Wt	1		SM 2540G	3/27/19	3/27/19 17:05	KG

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19C1132

Date Received: 3/22/2019

Field Sample #: TP-C1 (5-10)

Sampled: 3/12/2019 12:15

Sample ID: 19C1132-10

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses - EPH**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	55	mg/Kg dry	5	RL-08	MADEP-EPH-04-1.1	3/25/19	3/29/19 13:41	KLB
C19-C36 Aliphatics	270	55	mg/Kg dry	5		MADEP-EPH-04-1.1	3/25/19	3/29/19 13:41	KLB
Unadjusted C11-C22 Aromatics	350	55	mg/Kg dry	5		MADEP-EPH-04-1.1	3/25/19	3/29/19 13:41	KLB
C11-C22 Aromatics	330	55	mg/Kg dry	5		MADEP-EPH-04-1.1	3/25/19	3/29/19 13:41	KLB
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
Chlorooctadecane (COD)	78.5		40-140				3/29/19 13:41		
o-Terphenyl (OTP)	85.6		40-140				3/29/19 13:41		
2-Bromonaphthalene	96.9		40-140				3/29/19 13:41		
2-Fluorobiphenyl	90.4		40-140				3/29/19 13:41		

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19C1132

Date Received: 3/22/2019

Sampled: 3/12/2019 12:15

Field Sample #: TP-C1 (5-10)

Sample ID: 19C1132-10

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	87.7		% Wt	1		SM 2540G	3/27/19	3/27/19 17:05	KG

**Sample Extraction Data**

**Prep Method: SW-846 3546-MADEP-EPH-04-1.1**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19C1132-01 [TP-C3 (0-5)]	B226520	20.6	2.00	03/25/19
19C1132-02 [TP-C3 (5-10)]	B226520	20.0	2.00	03/25/19
19C1132-03 [TP-D3 (5-10)]	B226520	20.4	2.00	03/25/19
19C1132-04 [TP-D3 (10-15)]	B226520	20.7	2.00	03/25/19
19C1132-05 [TP-E3 (5-10)]	B226520	20.0	2.00	03/25/19
19C1132-06 [TP-F3 (0-5)]	B226520	20.6	2.00	03/25/19
19C1132-07 [TP-E2 (0-5)]	B226520	20.2	2.00	03/25/19
19C1132-08 [TP-C2 (0-5)]	B226520	20.8	2.00	03/25/19
19C1132-09 [TP-D1 (0-5)]	B226520	20.6	2.00	03/25/19
19C1132-10 [TP-C1 (5-10)]	B226520	20.8	2.00	03/25/19

**Prep Method: % Solids-SM 2540G**

Lab Number [Field ID]	Batch	Date
19C1132-01 [TP-C3 (0-5)]	B226771	03/27/19
19C1132-02 [TP-C3 (5-10)]	B226771	03/27/19
19C1132-03 [TP-D3 (5-10)]	B226771	03/27/19
19C1132-04 [TP-D3 (10-15)]	B226771	03/27/19
19C1132-05 [TP-E3 (5-10)]	B226771	03/27/19
19C1132-06 [TP-F3 (0-5)]	B226771	03/27/19
19C1132-07 [TP-E2 (0-5)]	B226771	03/27/19
19C1132-08 [TP-C2 (0-5)]	B226771	03/27/19
19C1132-09 [TP-D1 (0-5)]	B226771	03/27/19
19C1132-10 [TP-C1 (5-10)]	B226771	03/27/19

**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 B226520 - SW-846 3546**

**Blank (B226520-BLK1)**

Prepared: 03/25/19 Analyzed: 03/28/19

C9-C18 Aliphatics	ND	10	mg/Kg wet							
C19-C36 Aliphatics	ND	10	mg/Kg wet							
Unadjusted C11-C22 Aromatics	ND	10	mg/Kg wet							
C11-C22 Aromatics	ND	10	mg/Kg wet							
Acenaphthene	ND	0.10	mg/Kg wet							
Acenaphthylene	ND	0.10	mg/Kg wet							
Anthracene	ND	0.10	mg/Kg wet							
Benzo(a)anthracene	ND	0.10	mg/Kg wet							
Benzo(a)pyrene	ND	0.10	mg/Kg wet							
Benzo(b)fluoranthene	ND	0.10	mg/Kg wet							
Benzo(g,h,i)perylene	ND	0.10	mg/Kg wet							
Benzo(k)fluoranthene	ND	0.10	mg/Kg wet							
Chrysene	ND	0.10	mg/Kg wet							
Dibenz(a,h)anthracene	ND	0.10	mg/Kg wet							
Fluoranthene	ND	0.10	mg/Kg wet							
Fluorene	ND	0.10	mg/Kg wet							
Indeno(1,2,3-cd)pyrene	ND	0.10	mg/Kg wet							
2-Methylnaphthalene	ND	0.10	mg/Kg wet							
Naphthalene	ND	0.10	mg/Kg wet							
Phenanthrene	ND	0.10	mg/Kg wet							
Pyrene	ND	0.10	mg/Kg wet							
n-Decane	ND	0.10	mg/Kg wet							
n-Docosane	ND	0.10	mg/Kg wet							
n-Dodecane	ND	0.10	mg/Kg wet							
n-Eicosane	ND	0.10	mg/Kg wet							
n-Hexacosane	ND	0.10	mg/Kg wet							
n-Hexadecane	ND	0.10	mg/Kg wet							
n-Hexatriacontane	ND	0.10	mg/Kg wet							
n-Nonadecane	ND	0.10	mg/Kg wet							
n-Nonane	ND	0.10	mg/Kg wet							
n-Octacosane	ND	0.10	mg/Kg wet							
n-Octadecane	ND	0.10	mg/Kg wet							
n-Tetracosane	ND	0.10	mg/Kg wet							
n-Tetradecane	ND	0.10	mg/Kg wet							
n-Triacontane	ND	0.10	mg/Kg wet							
Naphthalene-aliphatic fraction	ND	0.10	mg/Kg wet							
2-Methylnaphthalene-aliphatic fraction	ND	0.10	mg/Kg wet							

Surrogate: Chlorooctadecane (COD)	4.23		mg/Kg wet	5.00		84.6	40-140			
Surrogate: o-Terphenyl (OTP)	4.65		mg/Kg wet	5.00		93.0	40-140			
Surrogate: 2-Bromonaphthalene	5.31		mg/Kg wet	5.00		106	40-140			
Surrogate: 2-Fluorobiphenyl	4.77		mg/Kg wet	5.00		95.4	40-140			

**LCS (B226520-BS1)**

Prepared: 03/25/19 Analyzed: 03/28/19

C9-C18 Aliphatics	24.8	10	mg/Kg wet	30.0		82.8	40-140			
C19-C36 Aliphatics	39.6	10	mg/Kg wet	40.0		98.9	40-140			
Unadjusted C11-C22 Aromatics	84.8	10	mg/Kg wet	85.0		99.8	40-140			
Acenaphthene	4.52	0.10	mg/Kg wet	5.00		90.5	40-140			
Acenaphthylene	4.19	0.10	mg/Kg wet	5.00		83.7	40-140			
Anthracene	4.94	0.10	mg/Kg wet	5.00		98.9	40-140			
Benzo(a)anthracene	4.82	0.10	mg/Kg wet	5.00		96.5	40-140			
Benzo(a)pyrene	4.68	0.10	mg/Kg wet	5.00		93.7	40-140			
Benzo(b)fluoranthene	4.79	0.10	mg/Kg wet	5.00		95.7	40-140			

**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 B226520 - SW-846 3546**

**LCS (B226520-BS1)**

Prepared: 03/25/19 Analyzed: 03/28/19

Benzo(g,h,i)perylene	4.38	0.10	mg/Kg wet	5.00		87.6	40-140			
Benzo(k)fluoranthene	4.78	0.10	mg/Kg wet	5.00		95.6	40-140			
Chrysene	4.89	0.10	mg/Kg wet	5.00		97.9	40-140			
Dibenz(a,h)anthracene	4.77	0.10	mg/Kg wet	5.00		95.4	40-140			
Fluoranthene	4.97	0.10	mg/Kg wet	5.00		99.4	40-140			
Fluorene	4.71	0.10	mg/Kg wet	5.00		94.2	40-140			
Indeno(1,2,3-cd)pyrene	4.48	0.10	mg/Kg wet	5.00		89.6	40-140			
2-Methylnaphthalene	3.73	0.10	mg/Kg wet	5.00		74.7	40-140			
Naphthalene	3.68	0.10	mg/Kg wet	5.00		73.5	40-140			
Phenanthrene	4.96	0.10	mg/Kg wet	5.00		99.2	40-140			
Pyrene	5.00	0.10	mg/Kg wet	5.00		100	40-140			
n-Decane	2.89	0.10	mg/Kg wet	5.00		57.7	40-140			
n-Docosane	4.85	0.10	mg/Kg wet	5.00		97.0	40-140			
n-Dodecane	3.56	0.10	mg/Kg wet	5.00		71.2	40-140			
n-Eicosane	4.66	0.10	mg/Kg wet	5.00		93.1	40-140			
n-Hexacosane	4.78	0.10	mg/Kg wet	5.00		95.6	40-140			
n-Hexadecane	4.68	0.10	mg/Kg wet	5.00		93.5	40-140			
n-Hexatriacontane	4.56	0.10	mg/Kg wet	5.00		91.2	40-140			
n-Nonadecane	4.68	0.10	mg/Kg wet	5.00		93.5	40-140			
n-Nonane	2.20	0.10	mg/Kg wet	5.00		44.0	30-140			
n-Octacosane	4.60	0.10	mg/Kg wet	5.00		92.1	40-140			
n-Octadecane	4.72	0.10	mg/Kg wet	5.00		94.4	40-140			
n-Tetracosane	4.81	0.10	mg/Kg wet	5.00		96.2	40-140			
n-Tetradecane	4.22	0.10	mg/Kg wet	5.00		84.3	40-140			
n-Triacontane	4.52	0.10	mg/Kg wet	5.00		90.5	40-140			
Naphthalene-aliphatic fraction	ND	0.10	mg/Kg wet	5.00			0-5			
2-Methylnaphthalene-aliphatic fraction	ND	0.10	mg/Kg wet	5.00			0-5			

Surrogate: Chlorooctadecane (COD)	4.20		mg/Kg wet	5.00		84.0	40-140			
Surrogate: o-Terphenyl (OTP)	4.82		mg/Kg wet	5.00		96.4	40-140			
Surrogate: 2-Bromonaphthalene	5.30		mg/Kg wet	5.00		106	40-140			
Surrogate: 2-Fluorobiphenyl	4.89		mg/Kg wet	5.00		97.8	40-140			

**LCS Dup (B226520-BS1)**

Prepared: 03/25/19 Analyzed: 03/28/19

C9-C18 Aliphatics	25.8	10	mg/Kg wet	30.0		85.9	40-140	3.68	25	
C19-C36 Aliphatics	39.6	10	mg/Kg wet	40.0		99.0	40-140	0.105	25	
Unadjusted C11-C22 Aromatics	85.2	10	mg/Kg wet	85.0		100	40-140	0.413	25	
Acenaphthene	4.59	0.10	mg/Kg wet	5.00		91.8	40-140	1.40	25	
Acenaphthylene	4.26	0.10	mg/Kg wet	5.00		85.2	40-140	1.69	25	
Anthracene	4.92	0.10	mg/Kg wet	5.00		98.5	40-140	0.424	25	
Benzo(a)anthracene	4.81	0.10	mg/Kg wet	5.00		96.2	40-140	0.297	25	
Benzo(a)pyrene	4.67	0.10	mg/Kg wet	5.00		93.5	40-140	0.190	25	
Benzo(b)fluoranthene	4.76	0.10	mg/Kg wet	5.00		95.3	40-140	0.486	25	
Benzo(g,h,i)perylene	4.38	0.10	mg/Kg wet	5.00		87.6	40-140	0.0365	25	
Benzo(k)fluoranthene	4.78	0.10	mg/Kg wet	5.00		95.5	40-140	0.0879	25	
Chrysene	4.90	0.10	mg/Kg wet	5.00		97.9	40-140	0.0368	25	
Dibenz(a,h)anthracene	4.76	0.10	mg/Kg wet	5.00		95.2	40-140	0.216	25	
Fluoranthene	4.93	0.10	mg/Kg wet	5.00		98.6	40-140	0.792	25	
Fluorene	4.73	0.10	mg/Kg wet	5.00		94.6	40-140	0.441	25	
Indeno(1,2,3-cd)pyrene	4.47	0.10	mg/Kg wet	5.00		89.3	40-140	0.253	25	
2-Methylnaphthalene	3.89	0.10	mg/Kg wet	5.00		77.7	40-140	4.03	25	
Naphthalene	3.90	0.10	mg/Kg wet	5.00		78.0	40-140	5.88	25	
Phenanthrene	4.94	0.10	mg/Kg wet	5.00		98.8	40-140	0.450	25	



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

**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 B226520 - SW-846 3546**

**LCS Dup (B226520-BSD1)**

Prepared: 03/25/19 Analyzed: 03/28/19

Pyrene	4.96	0.10	mg/Kg wet	5.00		99.3	40-140	0.779	25	
n-Decane	3.17	0.10	mg/Kg wet	5.00		63.4	40-140	9.36	25	
n-Docosane	4.84	0.10	mg/Kg wet	5.00		96.9	40-140	0.0825	25	
n-Dodecane	3.79	0.10	mg/Kg wet	5.00		75.8	40-140	6.23	25	
n-Eicosane	4.83	0.10	mg/Kg wet	5.00		96.6	40-140	3.66	25	
n-Hexacosane	4.82	0.10	mg/Kg wet	5.00		96.3	40-140	0.723	25	
n-Hexadecane	4.71	0.10	mg/Kg wet	5.00		94.2	40-140	0.761	25	
n-Hexatriacontane	4.59	0.10	mg/Kg wet	5.00		91.9	40-140	0.763	25	
n-Nonadecane	4.69	0.10	mg/Kg wet	5.00		93.8	40-140	0.374	25	
n-Nonane	2.43	0.10	mg/Kg wet	5.00		48.6	30-140	9.95	25	
n-Octacosane	4.64	0.10	mg/Kg wet	5.00		92.8	40-140	0.788	25	
n-Octadecane	4.74	0.10	mg/Kg wet	5.00		94.7	40-140	0.292	25	
n-Tetracosane	4.84	0.10	mg/Kg wet	5.00		96.8	40-140	0.632	25	
n-Tetradecane	4.34	0.10	mg/Kg wet	5.00		86.8	40-140	2.82	25	
n-Triacontane	4.56	0.10	mg/Kg wet	5.00		91.1	40-140	0.714	25	
Naphthalene-aliphatic fraction	ND	0.10	mg/Kg wet	5.00			0-5			
2-Methylnaphthalene-aliphatic fraction	ND	0.10	mg/Kg wet	5.00			0-5			
Surrogate: Chlorooctadecane (COD)	4.13		mg/Kg wet	5.00		82.6	40-140			
Surrogate: o-Terphenyl (OTP)	4.82		mg/Kg wet	5.00		96.4	40-140			
Surrogate: 2-Bromonaphthalene	5.47		mg/Kg wet	5.00		109	40-140			
Surrogate: 2-Fluorobiphenyl	4.96		mg/Kg wet	5.00		99.1	40-140			

**Matrix Spike (B226520-MS1)**

**Source: 19C1132-01**

Prepared: 03/25/19 Analyzed: 03/29/19

C9-C18 Aliphatics	40.3	54	mg/Kg dry	32.7	15.3	76.5	40-140			
<b>C19-C36 Aliphatics</b>	327	54	mg/Kg dry	43.6	215	<b>257</b>	*	40-140		MS-07A
<b>Unadjusted C11-C22 Aromatics</b>	390	54	mg/Kg dry	92.6	256	<b>144</b>	*	40-140		MS-07A
Acenaphthene	4.84	0.54	mg/Kg dry	5.45	ND	88.9	40-140			
Acenaphthylene	4.33	0.54	mg/Kg dry	5.45	ND	79.4	40-140			
Anthracene	4.38	0.54	mg/Kg dry	5.45	ND	80.4	40-140			
Benzo(a)anthracene	4.40	0.54	mg/Kg dry	5.45	0.742	67.1	40-140			
Benzo(a)pyrene	4.45	0.54	mg/Kg dry	5.45	0.869	65.7	40-140			
Benzo(b)fluoranthene	4.48	0.54	mg/Kg dry	5.45	0.929	65.2	40-140			
Benzo(g,h,i)perylene	4.10	0.54	mg/Kg dry	5.45	0.877	59.3	40-140			
Benzo(k)fluoranthene	4.10	0.54	mg/Kg dry	5.45	0.447	67.1	40-140			
Chrysene	4.58	0.54	mg/Kg dry	5.45	0.772	69.8	40-140			
Dibenz(a,h)anthracene	4.00	0.54	mg/Kg dry	5.45	ND	73.5	40-140			
Fluoranthene	5.52	0.54	mg/Kg dry	5.45	1.72	69.8	40-140			
Fluorene	4.29	0.54	mg/Kg dry	5.45	ND	78.7	40-140			
Indeno(1,2,3-cd)pyrene	3.75	0.54	mg/Kg dry	5.45	0.499	59.8	40-140			
2-Methylnaphthalene	4.19	0.54	mg/Kg dry	5.45	ND	76.9	40-140			
Naphthalene	4.26	0.54	mg/Kg dry	5.45	ND	78.1	40-140			
Phenanthrene	5.02	0.54	mg/Kg dry	5.45	0.953	74.6	40-140			
Pyrene	5.68	0.54	mg/Kg dry	5.45	1.68	73.4	40-140			
n-Nonane	2.04	0.54	mg/Kg dry	5.45	ND	37.4	30-140			
Surrogate: Chlorooctadecane (COD)	4.04		mg/Kg dry	5.45		74.2	40-140			
Surrogate: o-Terphenyl (OTP)	4.29		mg/Kg dry	5.45		78.7	40-140			
Surrogate: 2-Bromonaphthalene	5.96		mg/Kg dry	5.45		109	40-140			
Surrogate: 2-Fluorobiphenyl	5.61		mg/Kg dry	5.45		103	40-140			

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

**QUALITY CONTROL**

**Petroleum Hydrocarbons Analyses - EPH - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B226520 - SW-846 3546</b>										
<b>Matrix Spike Dup (B226520-MSD1)</b>	<b>Source: 19C1132-01</b>			Prepared: 03/25/19 Analyzed: 03/29/19						
C9-C18 Aliphatics	42.9	55	mg/Kg dry	33.0	15.3	83.5	40-140	6.15	50	
<b>C19-C36 Aliphatics</b>	374	55	mg/Kg dry	44.0	215	<b>363</b> *	40-140	13.6	50	MS-07A
<b>Unadjusted C11-C22 Aromatics</b>	440	55	mg/Kg dry	93.5	256	<b>196</b> *	40-140	12.0	50	MS-07A
Acenaphthene	5.06	0.55	mg/Kg dry	5.50	ND	92.0	40-140	4.44	50	
Acenaphthylene	4.53	0.55	mg/Kg dry	5.50	ND	82.4	40-140	4.68	50	
Anthracene	4.55	0.55	mg/Kg dry	5.50	ND	82.7	40-140	3.77	50	
Benzo(a)anthracene	4.56	0.55	mg/Kg dry	5.50	0.742	69.4	40-140	3.59	50	
Benzo(a)pyrene	4.37	0.55	mg/Kg dry	5.50	0.869	63.7	40-140	1.68	50	
Benzo(b)fluoranthene	4.40	0.55	mg/Kg dry	5.50	0.929	63.1	40-140	1.74	50	
Benzo(g,h,i)perylene	3.69	0.55	mg/Kg dry	5.50	0.877	51.2	40-140	10.5	50	
Benzo(k)fluoranthene	4.16	0.55	mg/Kg dry	5.50	0.447	67.5	40-140	1.33	50	
Chrysene	4.63	0.55	mg/Kg dry	5.50	0.772	70.2	40-140	1.24	50	
Dibenz(a,h)anthracene	3.72	0.55	mg/Kg dry	5.50	ND	67.6	40-140	7.34	50	
Fluoranthene	5.32	0.55	mg/Kg dry	5.50	1.72	65.6	40-140	3.65	50	
Fluorene	4.45	0.55	mg/Kg dry	5.50	ND	80.9	40-140	3.75	50	
Indeno(1,2,3-cd)pyrene	3.60	0.55	mg/Kg dry	5.50	0.499	56.4	40-140	4.22	50	
2-Methylnaphthalene	4.47	0.55	mg/Kg dry	5.50	ND	81.3	40-140	6.59	50	
Naphthalene	4.71	0.55	mg/Kg dry	5.50	ND	85.6	40-140	10.1	50	
Phenanthrene	4.91	0.55	mg/Kg dry	5.50	0.953	72.0	40-140	2.11	50	
Pyrene	5.45	0.55	mg/Kg dry	5.50	1.68	68.6	40-140	4.03	50	
n-Nonane	2.90	0.55	mg/Kg dry	5.50	ND	52.6	30-140	34.8	50	
Surrogate: Chlorooctadecane (COD)	4.02		mg/Kg dry	5.50		73.0	40-140			
Surrogate: o-Terphenyl (OTP)	4.42		mg/Kg dry	5.50		80.3	40-140			
Surrogate: 2-Bromonaphthalene	6.56		mg/Kg dry	5.50		119	40-140			
Surrogate: 2-Fluorobiphenyl	6.14		mg/Kg dry	5.50		112	40-140			

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

**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
<b>Batch B226771 - % Solids</b>										
<b>Duplicate (B226771-DUP2)</b>	<b>Source: 19C1132-01</b>			Prepared & Analyzed: 03/27/19						
% Solids	90.9		% Wt		90.9			0.00	20	
<b>Duplicate (B226771-DUP3)</b>	<b>Source: 19C1132-03</b>			Prepared & Analyzed: 03/27/19						
% Solids	85.8		% Wt		85.8			0.00	20	

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

**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.
MS-07A	Matrix spike and spike duplicate recovery is outside of control limits. Analysis is in control based on laboratory fortified blank recovery. Possibility of matrix effects that lead to low bias or non-homogeneous sample aliquot cannot be eliminated.
RL-08	Elevated reporting limit due to sample matrix interference. MA CAM reporting limit not met.

**CERTIFICATIONS**

**Certified Analyses included in this Report**

Analyte	Certifications
<b>MADEP-EPH-04-1.1 in Soil</b>	
C9-C18 Aliphatics	CT,NC,ME,NH-P
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
<b>MADEP-EPH-04-1.1 in Water</b>	
C9-C18 Aliphatics	CT,NC,ME,NH-P
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

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

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2005	100033	03/1/2020
MA	Massachusetts DEP	M-MA100	06/30/2019
CT	Connecticut Department of Public Health	PH-0567	09/30/2019
NY	New York State Department of Health	10899 NELAP	04/1/2019
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2020
RI	Rhode Island Department of Health	LAO00112	12/30/2019
NC	North Carolina Div. of Water Quality	652	12/31/2019
NJ	New Jersey DEP	MA007 NELAP	06/30/2019
FL	Florida Department of Health	E871027 NELAP	06/30/2019
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2019
ME	State of Maine	2011028	06/9/2019
VA	Commonwealth of Virginia	460217	12/14/2019
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2019
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2019
NC-DW	North Carolina Department of Health	25703	07/31/2019

14C0480

CHAIN OF CUSTODY RECORD

39 Spruce Street  
East Longmeadow, MA 01028

JLH  
10707  
Address: 100 N Washington St, 302, Boston, MA  
Phone: 617-275-5407  
Project Location: MA  
Project Number: 46047  
Project Manager: K. Searson  
Con-Test Quote Name/Number:  
Invoice Recipient: K. Searson  
Sampled By: K. Searson

**Retention Period (Classroom/Office)**  
7-Day  10-Day   
Due Date: 5-Day

**Rush Approval Required**  
1-Day  3-Day   
2-Day  4-Day

**Date Delivery**  
Format: PDF  EXCEL   
Other: EOD  
CLP Like Data Pkg Required:   
Email To: ksearson@vertekeng.com  
Fax To #:

3	1	1	1	1	1															
M	T	T	T	T	T															
V	A	A	A	A	A															

ANALYSIS REQUESTED  
 110C 8260  
 SNOC 8270  
 TRH 8100  
 MCP 14 METALS  
 PCB 8082 Soxhlet  
 Igg/Can/React/SPC

# of Containers  
 2 Preservation Code  
 3 Container Code

**Dissolved Metal Sample**  
 Field Filtered  
 Lab to Filter

**Organic Liquid Sample**  
 Field Filtered  
 Lab to Filter

Con-Test Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	Composite	Grab	Matrix Code	Conc Code														
01	1 TP-C3(0-5)	3/12/19	0740	X		S		X	X	X	X	X	X	X							
02	2 TP-C3(5-10)		0745																		
	3 TP-D3(0-5)		0810																		
03	4 TP-D3(5-10)		0815																		
04	5 TP-D3(10-15)		0830																		
	6 TP-E3(0-5)		0900																		
05	7 TP-E3(5-10)		0905																		
06	8 TP-F3(0-5)		0920																		
	9 TP-F3(5-10)		0925																		
07	10 TP-E2(0-5)		1000																		

Client requested EPH fractions on active samples JLH 3/23/19

Comments:

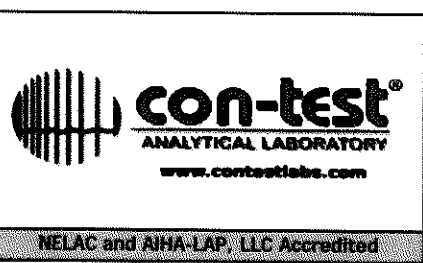
Please use the following codes to indicate possible sample concentration within the Conc Code column above:  
 H - High; M - Medium; L - Low; C - Clean; U - Unknown

Relinquished by: (signature) [Signature] Date/Time: 03/12/19 1525  
 Received by: (signature) [Signature] Date/Time: 3/12/19 1520  
 Relinquished by: (signature) [Signature] Date/Time: 3/12/19 1815  
 Received by: (signature) [Signature] Date/Time: 3/12/19 1815  
 Relinquished by: (signature) [Signature] Date/Time: 4.0, 4.7  
 Received by: (signature) [Signature] Date/Time:

**Detection Limit Requirements**  
 MA  CT  Other

**Special Requirements**  
 MA MCP Required  
 MCP Certification Form Required  
 CT RCP Required  
 RCP Certification Form Required  
 MA State DW Required  
 PWSID #

**Project Entity**  
 Government  Municipality  MWRA  WRTA  
 Federal  21 J  School  
 City  Brownfield  MBTA



**1 Matrix Codes:**  
 GW = Ground Water  
 WW = Waste Water  
 DW = Drinking Water  
 A = Air

**2 Container Codes:**  
 A = Amber Glass  
 G = Glass  
 P = Plastic  
 ST = Sterile  
 V = Vial  
 S = Summa Canister  
 T = Tedlar Bag  
 O = Other (please define)

**3 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



7-Day  10-Day   
 Due Date: 5-DAY

1-Day  3-Day   
 2-Day  4-Day

Format: PDF  EXCEL   
 Other: EPD

CLP Like Data Plg Required:

Email To: K. Sarson (k.sarson@contestlabs.com)

Fax To #:

Address: 100 N Washington St, 302 Boston MA  
 Phone: 617-275-5467  
 Project Location: MA  
 Project Number: 46047  
 Project Manager: K. Sarson  
 Con-Test Quote Name/Number:  
 Invoice Recipient: K. Sarson  
 Sampled By: K. Sarson

Con-Test Work Order #	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	Composite	Grab	Matrix Code	Conc Code
1	TP-E2 (S-10)	3/12/19	1005	X		S	
12	TP-D2 (O-S)		1020				
13	TP-D2 (S-10)		1025				
14	TP-C2 (O-S)		1050				
15	TP-C2 (S-10)		1055				
16	TP-D1 (O-S)		1145				
17	TP-D1 (S-10)		1150				
18	TP-C1 (O-S)		1210				
19	TP-C1 (S-10)		1215				
20	TP-B1 (O-S)		1240				

Comments:

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: 03/12/19 1525

Received by: (signature) [Signature] Date/Time: 3/12/19 1525

Relinquished by: (signature) [Signature] Date/Time: 3/12/19 1815

Received by: (signature) [Signature] Date/Time: 3/12/19 1815

Relinquished by: (signature) [Signature] Date/Time: 4/10/19

Received by: (signature) [Signature] Date/Time: 4/10/19

Relinquished by: (signature) [Signature] Date/Time: 4/10/19

Received by: (signature) [Signature] Date/Time: 4/10/19

Special Requirements:  
 MA MCP Required / MCP Certification Form Required  
 CT RCP Required / RCP Certification Form Required  
 MA State DW Required

PWSID #

Project Entity:  
 Government  Municipality  MWRA  WRTA  
 Federal  21 J  School  Other  
 City  Brownfield  MBTA

HEAC and AIHA-LAP LLC Accredited

**con-test**  
 ANALYTICAL LABORATORY  
 www.contestlabs.com

PCB ONLY  
 Soxhlet  
 Non Soxhlet



CHAIN OF CUSTODY RECORD

Address: 100 WASHINGTON ST 202 BOSTON MA  
 Phone: 617-275-5404  
 Project Location: MA  
 Project Number: 40047  
 Project Manager: K. Sarsen  
 Con-Test Quote Name/Number:  
 Invoice Recipient: K. Sarsen  
 Sampled By: K. Sarsen

7-Day  10-Day   
 Due Date: **FAS DAY**  
 1-Day  3-Day   
 2-Day  4-Day   
 Format: PDF  EXCEL  
 Other: **EDS**  
 CLP Like Data Pkg Required:   
 Email To: **K.Sarsen@contesting.com**  
 Fax To #:

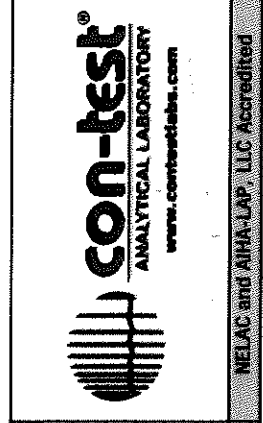
Con-Test Work Order #	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	Composite	Grab	Matrix Code	Conc Code
21	TP-B1(5-10)	3/12/19 12:45	1300	X		S	
22	TP-B2(0-5)	1305	1320				
23	TP-B2(5-10)	1325	1400				
24	TP-A1(0-5)						
25	TP-A2(5-10)						
26	TP-A1(5-10)						
27	TP-A2(0-5)						

Comments:

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: 3/12/19 15:25  
 Received by: (signature) **[Signature]** Date/Time: 3/12/19 15:25  
 Relinquished by: (signature) **[Signature]** Date/Time: 3/12/19 18:15  
 Received by: (signature) **[Signature]** Date/Time: 3/12/19 18:15  
 Relinquished by: (signature) **[Signature]** Date/Time: 4/04/17  
 Received by: (signature) **[Signature]** Date/Time: 4/04/17

**Special Requirements**  
 MA MCP Required  
 MCP Certification Form Required  
 CT RCP Required  
 RCP Certification Form Required  
 MA State DW Required  
 PWSID #

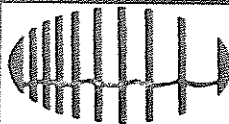


**Project Entity**  
 Government  
 Federal  
 City  
 Municipality  
 21 J  
 Brownfield  
 MWRA  
 School  
 MBTA  
 WRTA  
 Chromatogram  
 AHA-LAP, LLC  
 Other

**PCB ONLY**  
 Soxhlet  
 Non Soxhlet



I Have Not Confirmed Sample Container Numbers With Lab Staff Before Relinquishing Over Samples \_\_\_\_\_



**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 Vertex

Received By [Signature] Date 3/12/19 Time 18:15

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 # 5 Actual Temp - 4.0, 4.7  
 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 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? F Who was notified? \_\_\_\_\_  
 Are there Rushes? F Who was notified? \_\_\_\_\_  
 Are there Short Holds? T Who was notified? Miranda

Is there enough Volume? T  
 Is there Headspace where applicable? N/A 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? N/A Acid \_\_\_\_\_ Base \_\_\_\_\_

Vials	#	Containers:	#	#	#	#
Unp-		1 Liter Amb.		1 Liter Plastic		16 oz Amb.
HCL-		500 mL Amb.		500 mL Plastic		8oz Amb/Clear
Meoh-	<u>54, p27</u>	250 mL Amb.		250 mL Plastic		4oz Amb/Clear
Bisulfate-	<u>54</u>	Flashpoint		Col./Bacteria		2oz Amb/Clear
DI-		Other Glass		Other Plastic		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:**

Received 1 plastic bag for sample TP-F3(0-5) with analysis "Carb"



March 29, 2019

Kristen Sarson  
Vertex Engineering - Boston  
100 North Washington St. Suite 302  
Boston, MA 02114

Project Location: Wayland, MA  
Client Job Number:  
Project Number: 46047  
Laboratory Work Order Number: 19C1138

Enclosed are results of analyses for samples received by the laboratory on March 22, 2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, reading "Jessica Hoffman", is displayed on a light blue rectangular background.

Jessica L. Hoffman  
Project Manager

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

Vertex Engineering - Boston  
100 North Washington St. Suite 302  
Boston, MA 02114  
ATTN: Kristen Sarson

REPORT DATE: 3/29/2019

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 46047

**ANALYTICAL SUMMARY**

---

WORK ORDER NUMBER: 19C1138

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

PROJECT LOCATION: Wayland, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
TP-V-102	19C1138-01	Soil		MADEP-EPH-04-1.1 SM 2540G	

**CASE NARRATIVE SUMMARY**

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

For method MA EPH, only hydrocarbon ranges were requested and reported.

**MADEP-EPH-04-1.1****Qualifications:****RL-08**

Elevated reporting limit due to sample matrix interference. MA CAM reporting limit not met.

**Analyte & Samples(s) Qualified:****C9-C18 Aliphatics**

19C1138-01[TP-V-102]

**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 C 11-C22 aromatic range fraction in all samples in the batch. No significant modifications were made to the method.

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: Wayland, MA

Sample Description:

Work Order: 19C1138

Date Received: 3/22/2019

Sampled: 3/12/2019 14:35

Field Sample #: TP-V-102

Sample ID: 19C1138-01

Sample Matrix: Soil

**Petroleum Hydrocarbons Analyses - EPH**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	22	mg/Kg dry	2	RL-08	MADEP-EPH-04-1.1	3/25/19	3/29/19 8:54	KLB
C19-C36 Aliphatics	81	22	mg/Kg dry	2		MADEP-EPH-04-1.1	3/25/19	3/29/19 8:54	KLB
Unadjusted C11-C22 Aromatics	120	22	mg/Kg dry	2		MADEP-EPH-04-1.1	3/25/19	3/29/19 8:54	KLB
C11-C22 Aromatics	110	22	mg/Kg dry	2		MADEP-EPH-04-1.1	3/25/19	3/29/19 8:54	KLB
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
Chlorooctadecane (COD)	74.0		40-140					3/29/19 8:54	
o-Terphenyl (OTP)	84.0		40-140					3/29/19 8:54	
2-Bromonaphthalene	104		40-140					3/29/19 8:54	
2-Fluorobiphenyl	94.4		40-140					3/29/19 8:54	

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

Project Location: Wayland, MA

Sample Description:

Work Order: 19C1138

Date Received: 3/22/2019

Sampled: 3/12/2019 14:35

Field Sample #: TP-V-102

Sample ID: 19C1138-01

Sample Matrix: Soil

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	89.1		% Wt	1		SM 2540G	3/27/19	3/27/19 17:17	KG



---

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**Sample Extraction Data**

**Prep Method: SW-846 3546-MADEP-EPH-04-1.1**

<b>Lab Number [Field ID]</b>	<b>Batch</b>	<b>Initial [g]</b>	<b>Final [mL]</b>	<b>Date</b>
19C1138-01 [TP-V-102]	B226520	20.2	2.00	03/25/19

**Prep Method: % Solids-SM 2540G**

<b>Lab Number [Field ID]</b>	<b>Batch</b>	<b>Date</b>
19C1138-01 [TP-V-102]	B226789	03/27/19

**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 B226520 - SW-846 3546**

**Blank (B226520-BLK1)**

Prepared: 03/25/19 Analyzed: 03/28/19

C9-C18 Aliphatics	ND	10	mg/Kg wet							
C19-C36 Aliphatics	ND	10	mg/Kg wet							
Unadjusted C11-C22 Aromatics	ND	10	mg/Kg wet							
C11-C22 Aromatics	ND	10	mg/Kg wet							
Acenaphthene	ND	0.10	mg/Kg wet							
Acenaphthylene	ND	0.10	mg/Kg wet							
Anthracene	ND	0.10	mg/Kg wet							
Benzo(a)anthracene	ND	0.10	mg/Kg wet							
Benzo(a)pyrene	ND	0.10	mg/Kg wet							
Benzo(b)fluoranthene	ND	0.10	mg/Kg wet							
Benzo(g,h,i)perylene	ND	0.10	mg/Kg wet							
Benzo(k)fluoranthene	ND	0.10	mg/Kg wet							
Chrysene	ND	0.10	mg/Kg wet							
Dibenz(a,h)anthracene	ND	0.10	mg/Kg wet							
Fluoranthene	ND	0.10	mg/Kg wet							
Fluorene	ND	0.10	mg/Kg wet							
Indeno(1,2,3-cd)pyrene	ND	0.10	mg/Kg wet							
2-Methylnaphthalene	ND	0.10	mg/Kg wet							
Naphthalene	ND	0.10	mg/Kg wet							
Phenanthrene	ND	0.10	mg/Kg wet							
Pyrene	ND	0.10	mg/Kg wet							
n-Decane	ND	0.10	mg/Kg wet							
n-Docosane	ND	0.10	mg/Kg wet							
n-Dodecane	ND	0.10	mg/Kg wet							
n-Eicosane	ND	0.10	mg/Kg wet							
n-Hexacosane	ND	0.10	mg/Kg wet							
n-Hexadecane	ND	0.10	mg/Kg wet							
n-Hexatriacontane	ND	0.10	mg/Kg wet							
n-Nonadecane	ND	0.10	mg/Kg wet							
n-Nonane	ND	0.10	mg/Kg wet							
n-Octacosane	ND	0.10	mg/Kg wet							
n-Octadecane	ND	0.10	mg/Kg wet							
n-Tetracosane	ND	0.10	mg/Kg wet							
n-Tetradecane	ND	0.10	mg/Kg wet							
n-Triacontane	ND	0.10	mg/Kg wet							
Naphthalene-aliphatic fraction	ND	0.10	mg/Kg wet							
2-Methylnaphthalene-aliphatic fraction	ND	0.10	mg/Kg wet							
Surrogate: Chlorooctadecane (COD)	4.23		mg/Kg wet	5.00		84.6	40-140			
Surrogate: o-Terphenyl (OTP)	4.65		mg/Kg wet	5.00		93.0	40-140			
Surrogate: 2-Bromonaphthalene	5.31		mg/Kg wet	5.00		106	40-140			
Surrogate: 2-Fluorobiphenyl	4.77		mg/Kg wet	5.00		95.4	40-140			

**LCS (B226520-BS1)**

Prepared: 03/25/19 Analyzed: 03/28/19

C9-C18 Aliphatics	24.8	10	mg/Kg wet	30.0		82.8	40-140			
C19-C36 Aliphatics	39.6	10	mg/Kg wet	40.0		98.9	40-140			
Unadjusted C11-C22 Aromatics	84.8	10	mg/Kg wet	85.0		99.8	40-140			
Acenaphthene	4.52	0.10	mg/Kg wet	5.00		90.5	40-140			
Acenaphthylene	4.19	0.10	mg/Kg wet	5.00		83.7	40-140			
Anthracene	4.94	0.10	mg/Kg wet	5.00		98.9	40-140			
Benzo(a)anthracene	4.82	0.10	mg/Kg wet	5.00		96.5	40-140			
Benzo(a)pyrene	4.68	0.10	mg/Kg wet	5.00		93.7	40-140			
Benzo(b)fluoranthene	4.79	0.10	mg/Kg wet	5.00		95.7	40-140			

**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 B226520 - SW-846 3546**

**LCS (B226520-BS1)**

Prepared: 03/25/19 Analyzed: 03/28/19

Benzo(g,h,i)perylene	4.38	0.10	mg/Kg wet	5.00		87.6	40-140			
Benzo(k)fluoranthene	4.78	0.10	mg/Kg wet	5.00		95.6	40-140			
Chrysene	4.89	0.10	mg/Kg wet	5.00		97.9	40-140			
Dibenz(a,h)anthracene	4.77	0.10	mg/Kg wet	5.00		95.4	40-140			
Fluoranthene	4.97	0.10	mg/Kg wet	5.00		99.4	40-140			
Fluorene	4.71	0.10	mg/Kg wet	5.00		94.2	40-140			
Indeno(1,2,3-cd)pyrene	4.48	0.10	mg/Kg wet	5.00		89.6	40-140			
2-Methylnaphthalene	3.73	0.10	mg/Kg wet	5.00		74.7	40-140			
Naphthalene	3.68	0.10	mg/Kg wet	5.00		73.5	40-140			
Phenanthrene	4.96	0.10	mg/Kg wet	5.00		99.2	40-140			
Pyrene	5.00	0.10	mg/Kg wet	5.00		100	40-140			
n-Decane	2.89	0.10	mg/Kg wet	5.00		57.7	40-140			
n-Docosane	4.85	0.10	mg/Kg wet	5.00		97.0	40-140			
n-Dodecane	3.56	0.10	mg/Kg wet	5.00		71.2	40-140			
n-Eicosane	4.66	0.10	mg/Kg wet	5.00		93.1	40-140			
n-Hexacosane	4.78	0.10	mg/Kg wet	5.00		95.6	40-140			
n-Hexadecane	4.68	0.10	mg/Kg wet	5.00		93.5	40-140			
n-Hexatriacontane	4.56	0.10	mg/Kg wet	5.00		91.2	40-140			
n-Nonadecane	4.68	0.10	mg/Kg wet	5.00		93.5	40-140			
n-Nonane	2.20	0.10	mg/Kg wet	5.00		44.0	30-140			
n-Octacosane	4.60	0.10	mg/Kg wet	5.00		92.1	40-140			
n-Octadecane	4.72	0.10	mg/Kg wet	5.00		94.4	40-140			
n-Tetracosane	4.81	0.10	mg/Kg wet	5.00		96.2	40-140			
n-Tetradecane	4.22	0.10	mg/Kg wet	5.00		84.3	40-140			
n-Triacontane	4.52	0.10	mg/Kg wet	5.00		90.5	40-140			
Naphthalene-aliphatic fraction	ND	0.10	mg/Kg wet	5.00			0-5			
2-Methylnaphthalene-aliphatic fraction	ND	0.10	mg/Kg wet	5.00			0-5			

Surrogate: Chlorooctadecane (COD)	4.20		mg/Kg wet	5.00		84.0	40-140			
Surrogate: o-Terphenyl (OTP)	4.82		mg/Kg wet	5.00		96.4	40-140			
Surrogate: 2-Bromonaphthalene	5.30		mg/Kg wet	5.00		106	40-140			
Surrogate: 2-Fluorobiphenyl	4.89		mg/Kg wet	5.00		97.8	40-140			

**LCS Dup (B226520-BS1)**

Prepared: 03/25/19 Analyzed: 03/28/19

C9-C18 Aliphatics	25.8	10	mg/Kg wet	30.0		85.9	40-140	3.68	25	
C19-C36 Aliphatics	39.6	10	mg/Kg wet	40.0		99.0	40-140	0.105	25	
Unadjusted C11-C22 Aromatics	85.2	10	mg/Kg wet	85.0		100	40-140	0.413	25	
Acenaphthene	4.59	0.10	mg/Kg wet	5.00		91.8	40-140	1.40	25	
Acenaphthylene	4.26	0.10	mg/Kg wet	5.00		85.2	40-140	1.69	25	
Anthracene	4.92	0.10	mg/Kg wet	5.00		98.5	40-140	0.424	25	
Benzo(a)anthracene	4.81	0.10	mg/Kg wet	5.00		96.2	40-140	0.297	25	
Benzo(a)pyrene	4.67	0.10	mg/Kg wet	5.00		93.5	40-140	0.190	25	
Benzo(b)fluoranthene	4.76	0.10	mg/Kg wet	5.00		95.3	40-140	0.486	25	
Benzo(g,h,i)perylene	4.38	0.10	mg/Kg wet	5.00		87.6	40-140	0.0365	25	
Benzo(k)fluoranthene	4.78	0.10	mg/Kg wet	5.00		95.5	40-140	0.0879	25	
Chrysene	4.90	0.10	mg/Kg wet	5.00		97.9	40-140	0.0368	25	
Dibenz(a,h)anthracene	4.76	0.10	mg/Kg wet	5.00		95.2	40-140	0.216	25	
Fluoranthene	4.93	0.10	mg/Kg wet	5.00		98.6	40-140	0.792	25	
Fluorene	4.73	0.10	mg/Kg wet	5.00		94.6	40-140	0.441	25	
Indeno(1,2,3-cd)pyrene	4.47	0.10	mg/Kg wet	5.00		89.3	40-140	0.253	25	
2-Methylnaphthalene	3.89	0.10	mg/Kg wet	5.00		77.7	40-140	4.03	25	
Naphthalene	3.90	0.10	mg/Kg wet	5.00		78.0	40-140	5.88	25	
Phenanthrene	4.94	0.10	mg/Kg wet	5.00		98.8	40-140	0.450	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
<b>Batch B226520 - SW-846 3546</b>										
<b>LCS Dup (B226520-BSD1)</b>										
					Prepared: 03/25/19 Analyzed: 03/28/19					
Pyrene	4.96	0.10	mg/Kg wet	5.00		99.3	40-140	0.779	25	
n-Decane	3.17	0.10	mg/Kg wet	5.00		63.4	40-140	9.36	25	
n-Docosane	4.84	0.10	mg/Kg wet	5.00		96.9	40-140	0.0825	25	
n-Dodecane	3.79	0.10	mg/Kg wet	5.00		75.8	40-140	6.23	25	
n-Eicosane	4.83	0.10	mg/Kg wet	5.00		96.6	40-140	3.66	25	
n-Hexacosane	4.82	0.10	mg/Kg wet	5.00		96.3	40-140	0.723	25	
n-Hexadecane	4.71	0.10	mg/Kg wet	5.00		94.2	40-140	0.761	25	
n-Hexatriacontane	4.59	0.10	mg/Kg wet	5.00		91.9	40-140	0.763	25	
n-Nonadecane	4.69	0.10	mg/Kg wet	5.00		93.8	40-140	0.374	25	
n-Nonane	2.43	0.10	mg/Kg wet	5.00		48.6	30-140	9.95	25	
n-Octacosane	4.64	0.10	mg/Kg wet	5.00		92.8	40-140	0.788	25	
n-Octadecane	4.74	0.10	mg/Kg wet	5.00		94.7	40-140	0.292	25	
n-Tetracosane	4.84	0.10	mg/Kg wet	5.00		96.8	40-140	0.632	25	
n-Tetradecane	4.34	0.10	mg/Kg wet	5.00		86.8	40-140	2.82	25	
n-Triacontane	4.56	0.10	mg/Kg wet	5.00		91.1	40-140	0.714	25	
Naphthalene-aliphatic fraction	ND	0.10	mg/Kg wet	5.00			0-5			
2-Methylnaphthalene-aliphatic fraction	ND	0.10	mg/Kg wet	5.00			0-5			
Surrogate: Chlorooctadecane (COD)	4.13		mg/Kg wet	5.00		82.6	40-140			
Surrogate: o-Terphenyl (OTP)	4.82		mg/Kg wet	5.00		96.4	40-140			
Surrogate: 2-Bromonaphthalene	5.47		mg/Kg wet	5.00		109	40-140			
Surrogate: 2-Fluorobiphenyl	4.96		mg/Kg wet	5.00		99.1	40-140			

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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 B226789 - % Solids**

**Duplicate (B226789-DUP1)**

**Source: 19C1138-01**

Prepared & Analyzed: 03/27/19

% Solids	89.1		% Wt		89.1			0.00	20	
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**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.
RL-08	Elevated reporting limit due to sample matrix interference. MA CAM reporting limit not met.

**CERTIFICATIONS**

**Certified Analyses included in this Report**

Analyte	Certifications
<b>MADEP-EPH-04-1.1 in Soil</b>	
C9-C18 Aliphatics	CT,NC,ME,NH-P
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
<b>MADEP-EPH-04-1.1 in Water</b>	
C9-C18 Aliphatics	CT,NC,ME,NH-P
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

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

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2005	100033	03/1/2020
MA	Massachusetts DEP	M-MA100	06/30/2019
CT	Connecticut Department of Public Health	PH-0567	09/30/2019
NY	New York State Department of Health	10899 NELAP	04/1/2019
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2020
RI	Rhode Island Department of Health	LAO00112	12/30/2019
NC	North Carolina Div. of Water Quality	652	12/31/2019
NJ	New Jersey DEP	MA007 NELAP	06/30/2019
FL	Florida Department of Health	E871027 NELAP	06/30/2019
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2019
ME	State of Maine	2011028	06/9/2019
VA	Commonwealth of Virginia	460217	12/14/2019
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2019
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2019
NC-DW	North Carolina Department of Health	25703	07/31/2019

JLH

Vortex  
Address: 100 N Washington St, 302, Boston MA  
Phone: 617-275-1507  
Project Name: 46047 - Rivers Edge  
Project Location: MA  
Project Number: 46047  
Project Manager: K Sarson  
Con-Test Quote Name/Number:  
Invoice Recipient: K Sarson  
Sampled By: K Sarson

**Requested Turnaround Time**  
7-Day  10-Day   
Due Date: **5-DAY**

**Rush Approval Required**  
1-Day  3-Day   
2-Day  4-Day

**Data Delivery**  
Format: PDF  EXCEL   
Other: **EDP**  
CLP Like Data Pkg Required:   
Email To: **KSarson@contesting.com**  
Fax To #:

3	1	1	1	1	1															
U	A	A	A	A	A															
VOC 8260	SVOC 8270	TPH 8100	MCP 14 METALS	PCBS 8082 Solids	UP/Car/React/Sp															

# of Containers

<sup>2</sup> Preservation Code

<sup>3</sup> Container Code

**Dissolved Metals Samples**  
 Field Filtered  
 Lab to Filter

**Orthophosphate Samples**  
 Field Filtered  
 Lab to Filter

**1 Matrix Codes:**  
GW = Ground Water  
WW = Waste Water  
DW = Drinking Water  
A = Air  
S = Soil  
SL = Sludge  
SOL = Solid

**Container Codes:**  
B = Sodium Bisulfate  
X = Sodium Hydroxide  
T = Sodium Thiosulfate  
O = Other (please define)

**3 Container Codes:**  
A = Amber Glass  
G = Glass  
P = Plastic  
ST = Sterile  
V = Vial  
S = Summa Canister  
T = Tedlar Bag  
O = Other (please define)

Con-Test Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	Composite	Grab	Matrix Code	Conc Code														
01	TP-V-101	3/12/19	1430	Y		S															
	TP-V-102		1435																		
	TP-V-103		1440																		
	TP-V-104		1445																		
	TP-V-105		1450																		

Client would like EPH fractions on active samples JLH 3/22/19

Comments:

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: 03/12/19 1525

Received by: (signature) *[Signature]* Date/Time: 3/12/19 1525

Relinquished by: (signature) *[Signature]* Date/Time: 3/12/19 1815

Received by: (signature) *[Signature]* Date/Time: 3/12/19 8:15

Relinquished by: (signature) *[Signature]* Date/Time:

Received by: (signature) *[Signature]* Date/Time:

**Detection Limit Requirements**  
MA

**Special Requirements**  
MA MCP Required   
MCP Certification Form Required   
CT RCP Required   
RCP Certification Form Required   
MA State DW Required   
PWSID #



**Project Entity**  
 Government  Municipality  MWRA  WRTA  
 Federal  21 J  School  
 City  Brownfield  MBTA

**Other**  
 Chromatogram  
 AIHA-LAP, LLC

**PCB ONLY**  
 Soxhlet  
 Non Soxhlet



I Have Not Confirmed Sample Container Numbers With Lab Staff Before Relinquishing Over Samples \_\_\_\_\_



**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 Vertex

Received By MF Date 3/12/19 Time 18:15

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 # 5 Actual Temp - 2.3  
 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 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

Are there Rushes? F

Are there Short Holds? T

Is there enough Volume? T

Is there Headspace where applicable? N/A

Proper Media/Containers Used? T

Were trip blanks received? N, T

Do all samples have the proper pH? N/A

Who was notified? \_\_\_\_\_

Who was notified? \_\_\_\_\_

Who was notified? Miranda

MS/MSD? F

Is splitting samples required? F

On COC? F

Acid \_\_\_\_\_ Base \_\_\_\_\_

Vials	#	Containers	#	#	#
Unp-		1 Liter Amb.		1 Liter Plastic	16 oz Amb.
HCL-		500 mL Amb.		500 mL Plastic	8oz Amb/Clear <u>10</u>
Meoh-	<u>5</u>	250 mL Amb.		250 mL Plastic	4oz Amb/Clear
Bisulfate-	<u>10</u>	Flashpoint		Col./Bacteria	2oz Amb/Clear
DI-		Other Glass		Other Plastic	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 <u>5</u>
Meoh-	<u>5</u>	250 mL Amb.		250 mL Plastic	4oz Amb/Clear
Bisulfate-	<u>10</u>	Col./Bacteria		Flashpoint	2oz Amb/Clear
DI-		Other Plastic		Other Glass	Encore
Thiosulfate-		SOC Kit		Plastic Bag	Frozen:
Sulfuric-		Perchlorate		Ziplock	

**Comments:**

Trip blanks received not on COC



**APPENDIX E:  
REDUA SUMMARY**

**ATTACHMENT G-1**  
**DERIVATION OF METHOD 2 GW-1 GROUNDWATER STANDARDS**  
 Rivers Edge  
 484 - 490 Boston Post Road, Wayland, Massachusetts  
 VERTEX Project No. 67404  
 RTN 3-36013

**310 CMR 40.0983(2a): Noncancer GW-1 Standards**

$$[OHM]_{gw} = (RfD_{chronic} * 7000) / RAF_o$$

**310 CMR 40.0983(2b): Cancer GW-1 Standards**

$$[OHM]_{gw} = 0.035 / (CSF * RAF_o)$$

Where:  $[OHM]_{gw}$  = Risk-based concentration of oil and/or hazardous material ( $\mu\text{g/L}$ )  
 $RfD_{chronic}$  = Chronic oral reference dose ( $\text{mg/kg-d}$ )  
 $CSF$  = Oral cancer slope factor ( $(\text{mg/kg-d})^{-1}$ )  
 $RAF_o$  = Oral relative absorption factor  
 7000 = Average daily exposure factors and 20% risk allocation factor (noncancer)  
 0.035 = Average daily exposure factors and  $10^{-6}$  target cancer risk

Constituent of Potential Concern	CASRN	$RfD_{chronic}$		CSF		$RAF_o^b$	Noncancer Risk-Based Concentration $[OHM]_{gw}$	Cancer Risk-Based Concentration $[OHM]_{gw}$	Lowest Risk-Based Concentration $[OHM]_{gw}$	Ceiling Level <sup>f</sup>	Lowest Value: Target GW Concentration, Ceiling Level	Practical Quantitation Limit <sup>d</sup> (PQL)	Highest Value: PQL, GW/Ceiling Concentration	Method 2 GW-1 Standards <sup>e</sup>
		( $\text{mg/kg-d}$ )	Source <sup>a</sup>	( $(\text{mg/kg-d})^{-1}$ )	Source	(unitless)	( $\mu\text{g/L}$ )	( $\mu\text{g/L}$ )	( $\mu\text{g/L}$ )	( $\mu\text{g/L}$ )	( $\mu\text{g/L}$ )	( $\mu\text{g/L}$ )	( $\mu\text{g/L}$ )	( $\mu\text{g/L}$ )
Copper	7440-50-8	0.04	HEAST	NA	--	1	280	--	280	50,000	280	50	280	<b>280 Noncancer Risk</b>

Notes

mg/kg-d = Milligrams per kilogram per day

$\mu\text{g/L}$  = Micrograms per liter

NA = No toxicological value available

-- = Not applicable or not calculated due to lack of toxicological information.

a. Sources for toxicological values:

HEAST = Health Effects Assessment Summary Tables. Annual FY-1997. EPA-540-R-97. Office of Solid Waste and Emergency Response, U.S. Environmental Protection Agency. July.

b. A default oral absorption factor of one (1) was applied to all constituents in accordance with: USEPA 2004. Risk Assessment Guidance for Superfund Volume 1: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment), Final. EPA/540/99/005.

c. The ceiling concentration for Method 2 groundwater standards is specified in 310 CMR 40.0983(5).

d. Practical Quantitation Limits are obtained from:

USEPA 40 CFR 141.89(a)(1)(ii)(B)

e. Final Method 2 standards are rounded to one significant figure.

**ATTACHMENT G-2**  
**DERIVATION OF METHOD 2 GW-2 GROUNDWATER STANDARDS**  
484 - 490 Boston Post Road, Wayland, Massachusetts  
VERTEX Project No. 67404  
RTN 3-36013

**310 CMR 40.0983(3a): Noncancer Target Air Concentrations**

$$[\text{OHM}]_{\text{air}} = \text{RfC}_{\text{chronic}} * 0.2 * C$$

**310 CMR 40.0983(3a): Cancer Target Air Concentrations**

$$[\text{OHM}]_{\text{air}} = 10^{-6} / \text{UR}$$

**310 CMR 40.0983(3d): Target GW-2 Groundwater Standards**

$$[\text{OHM}]_{\text{gw}} = [\text{OHM}]_{\text{air}} / (\alpha * H * C * d)$$

Where:  $[\text{OHM}]_{\text{air}}$  = Risk-based concentration of oil and/or hazardous material in indoor air ( $\mu\text{g}/\text{m}^3$ )  
 $\text{RfC}_{\text{chronic}}$  = Chronic oral reference concentration ( $\text{mg}/\text{m}^3$ )  
UR = Unit risk ( $(\mu\text{g}/\text{m}^3)^{-1}$ )  
0.2 = Source allocation factor  
 $10^{-6}$  = One in one-million excess lifetime cancer risk  
C = Units conversion factor, 1000  $\mu\text{g} = 1 \text{ mg}$

Where:  $[\text{OHM}]_{\text{gw}}$  = Calculated GW-2 groundwater standard ( $\mu\text{g}/\text{L}$ )  
 $\alpha$  = Source attenuation factor (calculated)  
 $H_{\text{OHM}}$  = Henry's Law Constant  
d = Applied dilution/attenuation factor equal to 0.1.  
C = Units conversion factor, 1000  $\text{L}/\text{m}^3$

Constituent of Potential Concern	CAS Number	$\text{RfC}_{\text{chronic}}$		UR		Noncancer Risk-Based Concentration in Air $[\text{OHM}]_{\text{air}}$	Cancer Risk-Based Concentration in Air $[\text{OHM}]_{\text{air}}$	Lowest Risk-Based Concentration in Air $[\text{OHM}]_{\text{air}}$	Background Concentration	Highest Value: Background, Risk-Based Concentration	Source Attenuation Factor <sup>b</sup> ( $\alpha$ )	Henry's Law Constant <sup>c</sup> ( $H_{\text{OHM}}$ )	Target Groundwater Concentration $[\text{OHM}]_{\text{gw}}$	Ceiling Level <sup>d</sup>	Lowest Value: Target GW Concentration, Ceiling Level	Practical Quantitation Limit <sup>e</sup> (PQL)	Highest Value: PQL, GW/Ceiling Concentration	Method 2 GW-2 Standards <sup>f</sup>		
		( $\text{mg}/\text{m}^3$ )	Source <sup>a</sup>	( $(\mu\text{g}/\text{m}^3)^{-1}$ )	Source	( $\mu\text{g}/\text{m}^3$ )	( $\mu\text{g}/\text{m}^3$ )	( $\mu\text{g}/\text{m}^3$ )	( $\mu\text{g}/\text{m}^3$ )	( $\mu\text{g}/\text{m}^3$ )	(unitless)	(unitless)	( $\text{atm}\cdot\text{m}^3/\text{mol}$ )	( $\mu\text{g}/\text{L}$ )	( $\mu\text{g}/\text{L}$ )	( $\mu\text{g}/\text{L}$ )	( $\mu\text{g}/\text{L}$ )	( $\mu\text{g}/\text{L}$ )	( $\mu\text{g}/\text{L}$ )	Basis
Copper	7440-50-8	NA	--	NA	--	--	--	--	--	--	NA	NV	NV	--	50,000	50,000	50	50,000	50,000	Ceiling Level

**Notes**

$\text{mg}/\text{m}^3$  = Milligrams per cubic meter

$\mu\text{g}/\text{L}$  = Micrograms per liter

$\text{atm}\cdot\text{m}^3/\text{mol}$  = Atmosphere-cubic meter per mole

NA = No reference value available

NV = Constituent is not volatile, defined as having a Henry's Law constant of is less than  $10^{-5} \text{ atm}\cdot\text{m}^3/\text{mole}$

-- = Not applicable or not calculated due to lack of toxicological information.

a. Source for toxicological values:

b. The source attenuation factor for each constituent is calculated using MassDEP, Bureau of Waste Site Cleanup and Office of Research and Standards (ORS), Workbook: MCP GW2 alpha.xls, December 2009.

c. Henry's Law constants were obtained from Regional Screening Levels (RSLs) Chemical Specific Parameters. United States Environmental Protection Agency, Washington, DC, USA. November 2021.

d. The ceiling concentration for Method 2 groundwater standards is specified in 310 CMR 40.0983(5).

e. Practical Quantitation Limits are obtained from:

USEPA 40 CFR 141.89(a)(1)(ii)(B)

f. Final Method 2 standards are rounded to one significant figure.

**ATTACHMENT G-3**  
**DERIVATION OF METHOD 2 GW-3 GROUNDWATER STANDARDS**  
 484 - 490 Boston Post Road, Wayland, Massachusetts  
 VERTEX Project No. 67404  
 RTN 3-36013

**310 CMR 40.0983(4): Target GW-3 Groundwater Standards**

$$[\text{OHM}]_{\text{gw}} = [\text{OHM}]_{\text{sw}} * D_{\text{sw}} * \text{AF}$$

Where:

- $[\text{OHM}]_{\text{gw}}$  = Calculated GW-3 groundwater standard ( $\mu\text{g/L}$ )
- $[\text{OHM}]_{\text{sw}}$  = Lowest ecologically-based surface water concentration ( $\mu\text{g/L}$ )
- $D_{\text{sw}}$  = Surface water dilution factor
- AF = MCP attenuation factor based on the organic carbon partition coefficient (Koc) value
  - If  $K_{\text{oc}} < 1,000$ , AF = 2.5
  - If  $1000 \leq K_{\text{oc}} < 100,000$ , AF = 25
  - If  $K_{\text{oc}} \geq 100,000$ , AF = 100

Constituent of Potential Concern	CAS Number	Ecologically-Based Surface Water Concentration $[\text{OHM}]_{\text{sw}}$		Dilution Factor ( $D_{\text{sw}}$ ) (unitless)	Koc <sup>b</sup> (L/kg)	MCP Attenuation Factor (AF) (unitless)	Target Groundwater Concentration $[\text{OHM}]_{\text{gw}}$ ( $\mu\text{g/L}$ )	Ceiling Level <sup>c</sup> ( $\mu\text{g/L}$ )	Lowest Value: Target GW Concentration, Ceiling Level ( $\mu\text{g/L}$ )	Practical Quantitation Limit <sup>d</sup> (PQL) ( $\mu\text{g/L}$ )	Highest Value: PQL, GW/Ceiling Concentration ( $\mu\text{g/L}$ )	Method 2 GW-3 Standards	
		( $\mu\text{g/L}$ )	Source <sup>a</sup> (1)									( $\mu\text{g/L}$ )	Basis
Copper	7440-50-8	9	(1)	10	--	100	9000	50,000	9000	50	9,000	9,000	Ecologically-Based Concentration

Notes

$\mu\text{g/L}$  = Micrograms per liter

L/kg = Liters per kilogram

-- = Not applicable or not calculated due to lack of toxicological information.

a. Sources for ecologically-based surface water values:

(1) EPA Region 3 Biological Technical Assistance Group (BTAG) Screening Values - Freshwater (2015)

References

RAIS: Oak Ridge National Laboratory Risk Assessment Information System. Ecological Benchmark Tool. Searched February 2022. Available online at: [https://rais.ornl.gov/tools/eco\\_search.php](https://rais.ornl.gov/tools/eco_search.php)

b. Organic carbon partition coefficients were obtained from PCKOCWIN v1.66, Estimation Programs Interface (EPI) Suite<sup>TM</sup>. United States Environmental Protection Agency, Washington, DC, USA. 2000.

c. The ceiling concentration for Method 2 groundwater standards is specified in 310 CMR 40.0983(5).

d. Practical Quantitation Limits are obtained from:

USEPA 40 CFR 141.89(a)(1)(ii)(B)

**ATTACHMENT G-4**  
**DERIVATION OF LEACHING-BASED SOIL STANDARDS<sup>a</sup>**  
 484 - 490 Boston Post Road, Wayland, Massachusetts  
 VERTEX Project No. 67404  
 RTN 3-36013

$$DAF_{OHM} = (6207 * H_{OHM}) + (0.166 * Koc)$$

$$[OHM]_{soil} = DAF_{OHM} * [OHM]_{gw} * C$$

Where:

$DAF_{OHM}$  = Dilution/Attenuation Factor

$H_{OHM}$  = Henry's Law Constant (atm-m<sup>3</sup>/mol)

Koc = Organic carbon partition coefficient (L/kg)

$[OHM]_{gw}$  = Target groundwater concentration (µg/L)

C = Units conversion factor, 0.001 mg = 1 µg

$[OHM]_{soil}$  = Leaching-based soil concentration (mg/kg)

Constituent of Potential Concern	CASRN	Henry's Law Constant <sup>b</sup> ( $H_{OHM}$ )	Koc <sup>c</sup>	$DAF_{OHM}$	GW-1	GW-2	GW-3	$[OHM]_{soil}$ - GW-1	$[OHM]_{soil}$ - GW-2	$[OHM]_{soil}$ - GW-3
		(atm-m <sup>3</sup> /mol)	(L/kg)	(unitless)	(µg/L)	(µg/L)	(µg/L)	(mg/kg)	(mg/kg)	(mg/kg)
Copper	7440-50-8	--	--	--	280	50000	9000	--	--	--

Notes

µg/L = Micrograms per liter

mg/kg = Milligrams per kilogram

atm-m<sup>3</sup>/mol = Atmosphere-cubic meter per mole

-- = Not applicable. A standard for the indicated groundwater category was not calculated for this constituent.

a. Standards are calculated based on equations 11 and 12. Massachusetts Department of Environmental Protection (MassDEP). 1994. Background Documentation for the Development of MCP Numerical Standards. Bureau of Waste Site Cleanup and Office of Research and Standards, Boston, MA. April, 1994.

b. Henry's Law constants were obtained from Regional Screening Levels (RSLs) Chemical Specific Parameters. United States Environmental Protection Agency, Washington, DC, USA. November 2021.

c. Organic carbon partition coefficients were obtained from PCKOCWIN v1.66, Estimation Programs Interface (EPI) Suite<sup>TM</sup>. United States Environmental Protection Agency, Washington, DC, USA. 2000.

**ATTACHMENT G-5**  
**DERIVATION OF METHOD 2 DIRECT CONTACT SOIL STANDARDS FOR S-1 SOILS**  
 484 - 490 Boston Post Road, Wayland, Massachusetts  
 VERTEX Project No. 67404  
 RTN 3-36013

**310 CMR 40.0984(2a): Noncancer S-1 Standards**

$$[OHM]_{soil} = (RfD_{chronic} * 0.2 * C) / ((RAF_o * 2.4) + (RAF_d * 21))$$

**310 CMR 40.0984(3a): Cancer S-1 Standards**

$$[OHM]_{soil} = (10^{-6} * C) / (CSF * ((RAF_o * 0.38) + (RAF_d * 4.1)))$$

Where:  $[OHM]_{soil}$  = Risk-based concentration of oil and/or hazardous material  
 $RfD_{chronic}$  = Chronic oral reference dose (mg/kg-d)  
 CSF = Oral cancer slope factor ((mg/kg-d)<sup>-1</sup>)  
 $RAF_o$  = Oral relative absorption factor  
 $RAF_d$  = Dermal relative absorption factor  
 0.2 = Source allocation factor  
 $10^{-6}$  = Target Cancer Risk  
 C = Units conversion factor, 100,000 mg = 1 kg  
 Other numerical values = Average daily exposure factors

Constituent of Potential Concern	CASRN	$RfD_{chronic}$		CSF		$RAF_o^b$	$RAF_d^b$	Noncancer Risk-Based Concentration	Cancer Risk-Based Concentration	Lowest Risk-Based Concentration
		(mg/kg-d)	Source <sup>a</sup>	((mg/kg-d) <sup>-1</sup> )	Source			$[OHM]_{soil}$ (mg/kg)	$[OHM]_{soil}$ (mg/kg)	$[OHM]_{soil}$ (mg/kg)
Copper	7440-50-8	0.04	HEAST	NA	--	1	1	342	--	<b>342</b>

Notes

mg/kg-d = Milligrams per kilogram per day

NA = No toxicity information available.

-- = Not applicable or not calculated due to lack of toxicological information.

a. Sources for toxicological values:

HEAST = Health Effects Assessment Summary Tables. Values current as of July 2020.

b. A default oral and dermal absorption factor of one (1) was applied to all constituents in accordance with: USEPA 2004. Risk Assessment Guidance for Superfund Volume 1: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment), Final. EPA/540/99/005.



**ATTACHMENT G-6**  
**DERIVATION OF METHOD 2 S-1/GW-1 SOIL STANDARDS**  
 Rivers Edge  
 484 - 490 Boston Post Road, Wayland, Massachusetts  
 VERTEX Project No. 67404

Constituent of Potential Concern	CASRN	Risk-Based Direct Contact Concentration (S-1)	Leaching-Based Concentration (GW-1)	Vapor Pressure	ORL <sub>50%</sub> <sup>a</sup>	Odor Index <sup>b</sup>	Ceiling Level <sup>c</sup>	Lowest of Risk-Based, Leaching, Ceiling Levels	Background	Practical Quantitation Limit <sup>d</sup> (PQL)	Highest Value: Risk-Based, Background, PQL	<b>Method 2 S-1/GW-1 Soil Standard<sup>e</sup></b>
		(mg/kg)	(mg/kg)	(TORR)	(ppm)	(unitless)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Copper	7440-50-8	342	--	--	NA	NA	1,000	341.88	40	0.5	342	<b>342 Risk-Based</b>

**Notes**

mg/kg = Milligrams per kilogram

ppm = Parts per million

NA = Not applicable because no odor information available.

-- = Not applicable

a. ORL 50% = Odor threshold, defined as "the concentration of the oil or hazardous material at which 50% of the general population would recognize its odor" (310 CMR 40.0984(9)).

Values were obtained from: "2010 Respirator Selection Guide", 3M Occupational Health and Environmental Safety Division. December 2009.

b. The Odor Index is calculated according to 310 CMR 40.0984(9): Odor Index = Vapor Pressure / ORL<sub>50%</sub>.

c. Ceiling concentrations for Method 2 S-1 soil standards are determined based on the Odor Index in accordance with 310 CMR 40.0984(9a).

d. Practical Quantitation Limits are obtained from:

USEPA Method 6020A: Inductively Coupled Plasma - Mass Spectrometry, part of Test Methods for Evaluating Solid Waste, Revision 6, November 2004.

e. Final Method 2 standards are rounded to one significant figure.

**ATTACHMENT G-7**  
**DERIVATION OF METHOD 2 S-1/GW-2 SOIL STANDARDS**  
 484 - 490 Boston Post Road, Wayland, Massachusetts  
 VERTEX Project No. 67404  
 RTN 3-36013

Constituent of Potential Concern	CASRN	Risk-Based Direct Contact Concentration (S-1)	Leaching-Based Concentration (GW-2)	Vapor Pressure	ORL <sub>50%</sub> <sup>a</sup>	Odor Index <sup>b</sup>	Ceiling Level <sup>c</sup>	Lowest of Risk-Based, Leaching, Ceiling Levels	Background	Practical Quantitation Limit <sup>d</sup> (PQL)	Highest Value: Risk-Based, Background, PQL	Method 2 S-1/GW-2 Soil Standard	
		(mg/kg)	(mg/kg)	(TORR)	(ppm)	(unitless)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Copper	7440-50-8	342	--	--	NA	NA	1,000	342	40	0.5	342	342	Risk-Based

**Notes**

mg/kg = Milligrams per kilogram

ppm = Parts per million

NA = Not applicable because no odor information available.

-- = Not applicable

a. ORL 50% = Odor threshold, defined as "the concentration of the oil or hazardous material at which 50% of the general population would recognize its odor" (310 CMR 40.0984(9)). Values were obtained from: U.S. Department of Health and Human Services. Hazardous Substances Data Bank (HSDB, online database). National Toxicology Information Program, National Library of Medicine, Bethesda, MD. 1993.

b. The Odor Index is calculated according to 310 CMR 40.0984(9): Odor Index = Vapor Pressure / ORL<sub>50%</sub>.

c. Ceiling concentrations for Method 2 S-1 soil standards are determined based on the Odor Index in accordance with 310 CMR 40.0984(9a).

d. Practical Quantitation Limits are obtained from:

USEPA Method 6020A: Inductively Coupled Plasma - Mass Spectrometry, part of Test Methods for Evaluating Solid Waste, Revision 6, November 2004.

**ATTACHMENT G-8**  
**DERIVATION OF METHOD 2 S-1/GW-3 SOIL STANDARDS**  
 484 - 490 Boston Post Road, Wayland, Massachusetts  
 VERTEX Project No. 67404  
 RTN 3-36013

Constituent of Potential Concern	CASRN	Risk-Based Direct Contact Concentration (S-1)	Leaching-Based Concentration (GW-3)	Vapor Pressure	ORL <sub>50%</sub> <sup>a</sup>	Odor Index <sup>b</sup>	Ceiling Level <sup>c</sup>	Lowest of Risk-Based, Leaching, Ceiling Levels	Background	Practical Quantitation Limit <sup>d</sup> (PQL)	Highest Value: Risk-Based, Background, PQL	Method 2 S-1/GW-3 Soil Standard	
		(mg/kg)	(mg/kg)	(TORR)	(ppm)	(unitless)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Copper	7440-50-8	342	--	--	NA	NA	1,000	341.88	40	0.5	342	342	Risk-Based

**Notes**

mg/kg = Milligrams per kilogram

ppm = Parts per million

NA = Not applicable because no odor information available.

-- = Not applicable

a. ORL 50% = Odor threshold, defined as "the concentration of the oil or hazardous material at which 50% of the general population would recognize its odor" (310 CMR 40.0984(9)). Values were obtained from: U.S. Department of Health and Human Services. Hazardous Substances Data Bank (HSDB, online database). National Toxicology Information Program, National Library of Medicine, Bethesda, MD. 1993.

b. The Odor Index is calculated according to 310 CMR 40.0984(9): Odor Index = Vapor Pressure / ORL<sub>50%</sub>.

c. Ceiling concentrations for Method 2 S-1 soil standards are determined based on the Odor Index in accordance with 310 CMR 40.0984(9a).

d. Practical Quantitation Limits are obtained from:

USEPA Method 6020A: Inductively Coupled Plasma - Mass Spectrometry, part of Test Methods for Evaluating Solid Waste, Revision 6, November 2004.

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	<b>Attachment G-9</b>			<b>General Statistics on Uncensored Data</b>									
2	Date/Time of Computation			ProUCL 5.12/15/2022 1:00:48 PM									
3	<b>User Selected Options</b>												
4	From File			ProUCL input_a.xls									
5	Full Precision			OFF									
6													
7	<b>From File: ProUCL input_a.xls</b>												
8													
9	<b>General Statistics for Censored Data Set (with NDs) using Kaplan Meier Method</b>												
10													
11	<b>Variable</b>	<b>NumObs</b>	<b># Missing</b>	<b>Num Ds</b>	<b>NumNDs</b>	<b>% NDs</b>	<b>Min ND</b>	<b>Max ND</b>	<b>KM Mean</b>	<b>KM Var</b>	<b>KM SD</b>	<b>KM CV</b>	
12	Antimony	21	0	1	20	95.24%	1.7	1.8	1.89	0.726	0.852	0.451	
13	Copper	21	0	21	0	0.00%	N/A	N/A	37.91	1509	38.85	1.025	
14	Lead	24	0	24	0	0.00%	N/A	N/A	52.83	3802	61.66	1.167	

**APPENDIX F:  
PUBLIC NOTIFICATION DOCUMENTS**

## NOTICE OF PERMANENT SOLUTION WITH NO CONDITIONS

**RIVER'S EDGE  
484-490 BOSTON POST ROAD  
WAYLAND, MASSACHUSETTS  
RELEASE TRACKING NUMBER 3-36013**

September 6, 2022

This Notice is provided pursuant to Sections 310 Code of Massachusetts Regulations (CMR) 40.1403(3)(f) and 1406 of the Massachusetts Contingency Plan (MCP). A Permanent Solution with No Conditions, as defined by Section 310 CMR 40.1041(1) of the MCP, has been achieved at the River's Edge property, located at the above-referenced location, that is listed by the Massachusetts Department of Environmental Protection (MassDEP) under Release Tracking Number (RTN) 3-36013.

As a result of response actions conducted as a Release Abatement Measure (RAM), which included the excavation and off-site transport of impacted soils, a condition of No Significant Risk of harm to human health, public welfare, safety, and the environment for current and reasonably foreseeable activities and uses has been achieved for the Site.

Any person interested in obtaining additional information about the **PERMANENT SOLUTION WITH NO CONDITIONS** may contact Mr. William Gibbons at The Vertex Companies, LLC, 100 North Washington Street, Suite 302, Boston, MA 02114, (617) 275-5407.

The **PERMANENT SOLUTION WITH NO CONDITIONS** and the Disposal Site file can be reviewed at the Massachusetts Department of Environmental Protection, Northeast Regional Office, 205B Lowell Street, Wilmington, MA 01887, or online at:

<http://www.mass.gov/eea/agencies/massdep/cleanup/sites/>

### Distribution

1. Town of Wayland – Town Administrator's Office and Public Health Department
2. MassDEP Northeast Region, Bureau of Waste Site Cleanup (electronically)